

5.16 ft/s

weekly

Calculate Erosion Hazard

4

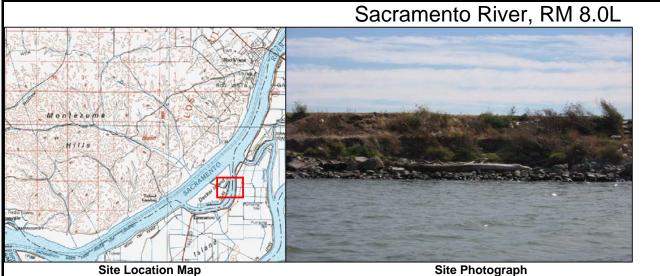
4

51

Velocity (\*2)

Human Usage

**Erosion Hazard** 



Site Location Map Site Photograph Cross Section
Score of 0 indicates no erosion hazard, score of 72 maximum erosion hazard score

Criteria	Score	Notes
Bank Slope (*2)	5	near vertical
Berm Width (*2) - Estimated	5	no berm
Location of erosion	2	levee slope
Bank Stability	4	vertical for more than half bank height
Site Relative to Bend	3	outside of a greater than 90 degree bend
Vegetation Cover	2	40 to 50 %
Tree Hazard	0	no trees
Soil Type (*2)	4	sands and silts
Velocity (*2)	4	5.13 ft/s
Human Usage	4	adjacent to road, weekly
Engaine Hamand	F4	Calculate Funcion Harrard

Erosion Hazard 51 Calculate Erosion Hazard

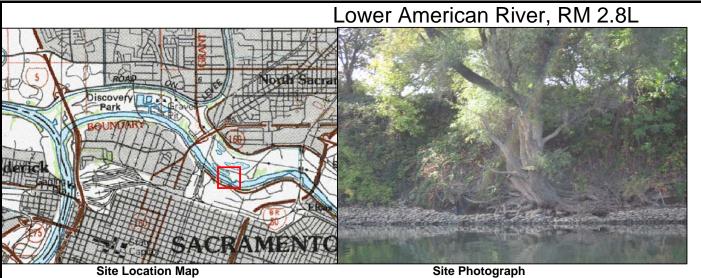
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Site Location Map

Site Photograph

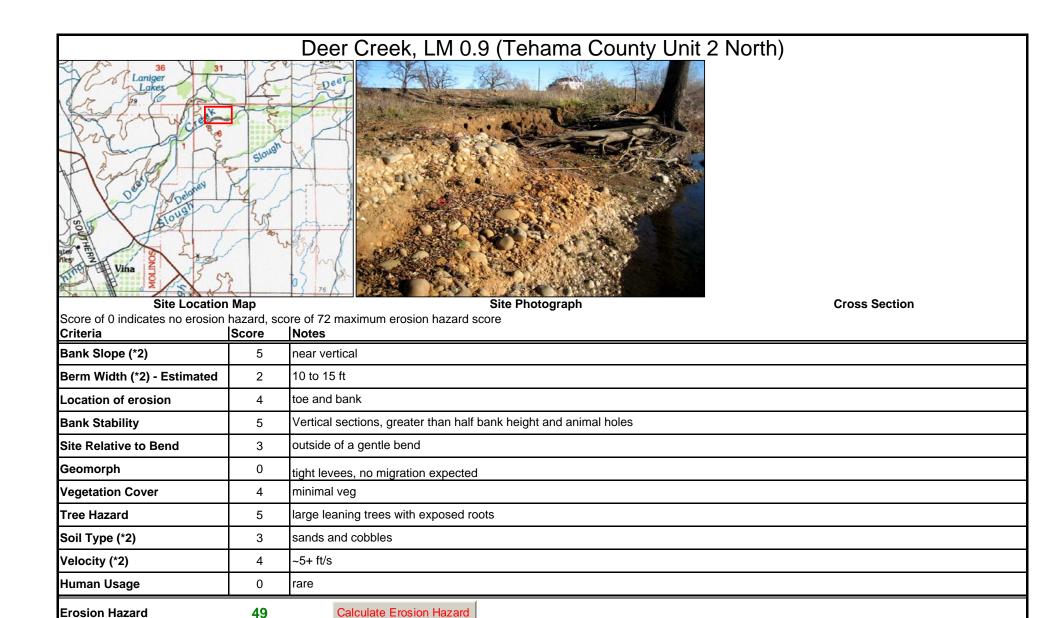
Score of 0 indicates no erosion Criteria	hazard, so <b>Score</b>	core of 72 maximum erosion hazard score  Notes
Bank Slope (*2)	3	1.5:1 slope
Berm Width (*2) - Estimated	5	no berm
Location of erosion	4	toe and lower bank
Bank Stability	2	vertical sections, less than half bank height
Site Relative to Bend	1	straight
Vegetation Cover	1	60 to 70 %
Tree Hazard	5	large trees, exposed roots, and leaning
Soil Type (*2)	4	sands and silts
Velocity (*2)	4	5.36 ft/s
Human Usage	5	daily
Erosion Hazard	50	Calculate Erosion Hazard

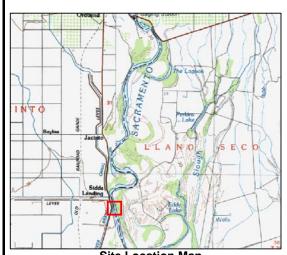


Site Location Map
Score of 0 indicates no erosion hazard, score of 72 maximum erosion hazard score

Score of 0 indicates no erosion hazard, score of 72 maximum erosion hazard score

Criteria	Score	Notes
Bank Slope (*2)	4	1:1 slope
Berm Width (*2) - Estimated	2	10 to 20 ft
Location of erosion	4	whole bank and toe
Bank Stability	5	caves greater than 4 ft and vertical sections
Site Relative to Bend	2	just downstream of a bend
Vegetation Cover	2	50 -60%
Tree Hazard	5	trees with exposed roots, some leaning
Soil Type (*2)	4	sands and silts
Velocity (*2)	3	3.39 ft/s
Human Usage	5	Debris and paths indicative of daily use
Erosion Hazard	49	Calculate Erosion Hazard



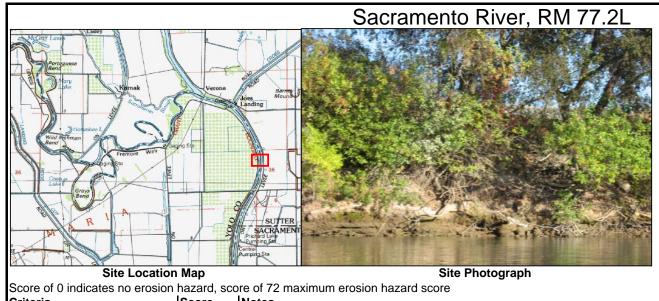


## Sacramento River, RM 177.8R



Site Location Map Sit

One Location	ii iiiap	One i netograph	
Score of 0 indicates no erosion Criteria	hazard, so    Score	core of 72 maximum erosion hazard score   Notes	
Bank Slope (*2)	3	1.5:1 slope	
Berm Width (*2) - Estimated	5	no berm	
Location of erosion	4	upper bank and toe	
Bank Stability	2	vertical sections, less than half bank height, 40 to 50 ft scour hole	
Site Relative to Bend	5	outside of a less than 90 degree bend	
Vegetation Cover	2	60%	
Tree Hazard	2	2 medium trees	
Soil Type (*2)	2	clays and silts	
Velocity (*2)	4	5.27 ft/s	
Human Usage	5	adjacent to road, next to a pump intake, daily use	
Erosion Hazard	48	Calculate Erosion Hazard	



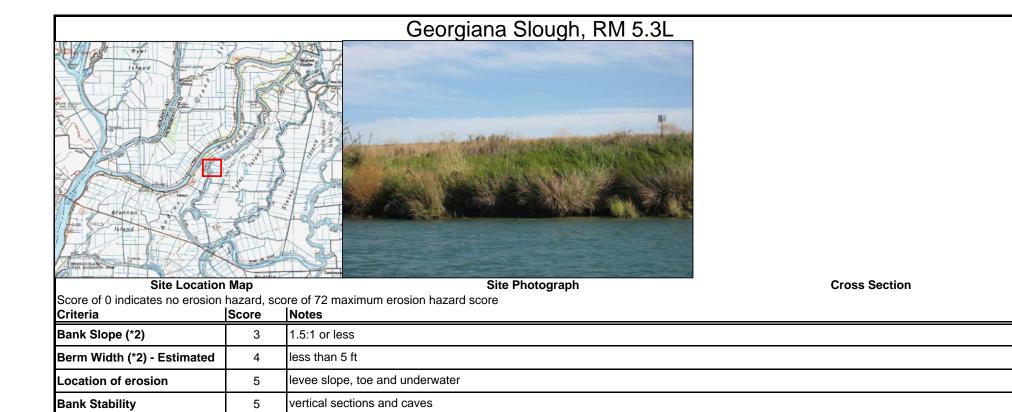
Criteria	Score	Notes
Bank Slope (*2)	4	less than 1:1
Berm Width (*2) - Estimated	0	30 ft
Location of erosion	3	toe
Bank Stability	5	vertical sections greater than half bank height and animal holes
Site Relative to Bend	3	outside of a gentle bend
Vegetation Cover	4	less than 20%
Tree Hazard	5	exposed roots, trees leaning
Soil Type (*2)	4	sands and silts
Velocity (*2)	4	5.01 ft/s
Human Usage	4	weekly, paths and adjacent to road
Erosion Hazard	48	Calculate Erosion Hazard



**Cross Section** Score of 0 indicates no erosion hazard, score of 72 maximum erosion hazard score

Criteria | Score | Notes

Criteria	Score	Notes
Bank Slope (*2)	3	1.5:1
Berm Width (*2) - Estimated	3	5 to 10 ft
Location of erosion	4	toe, lower bank, and berm
Bank Stability	3	cave, greater than 4 ft
Site Relative to Bend	1	straight
Vegetation Cover	2	60%
Tree Hazard	5	trees with some exposed roots and leaning
Soil Type (*2)	4	sands and silts
Velocity (*2)	4	5.97 ft/s
Human Usage	5	daily
Erosion Hazard	48	Calculate Erosion Hazard



Site Relative to Bend

Vegetation Cover

Tree Hazard

Soil Type (\*2)

Velocity (\*2)

Human Usage

**Erosion Hazard** 

3

1

4

4

3

2

48

outside of a gentle bend

large trees with exposed roots

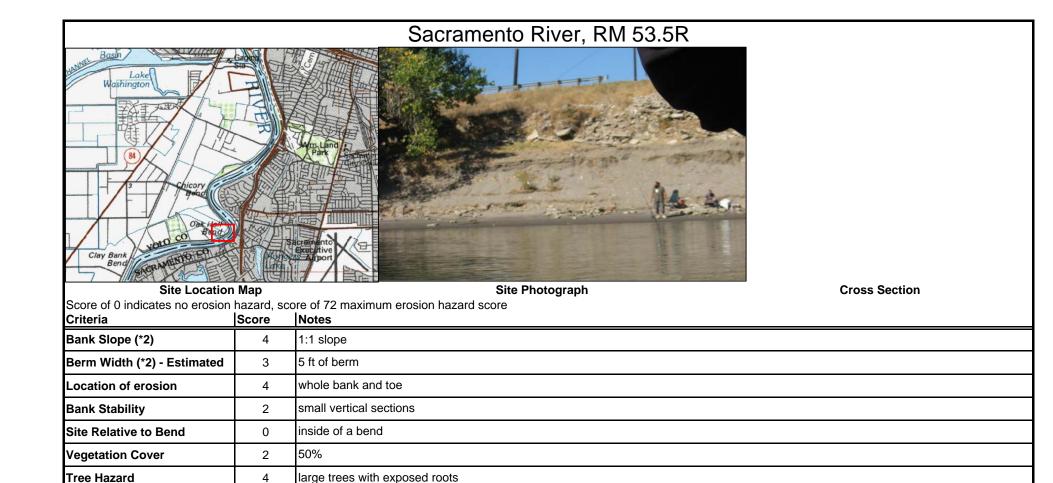
Calculate Erosion Hazard

70% cover

3.95 ft/s

seasonal

sands and silts



Soil Type (\*2)

Velocity (\*2)

Human Usage

**Erosion Hazard** 

4

4

5

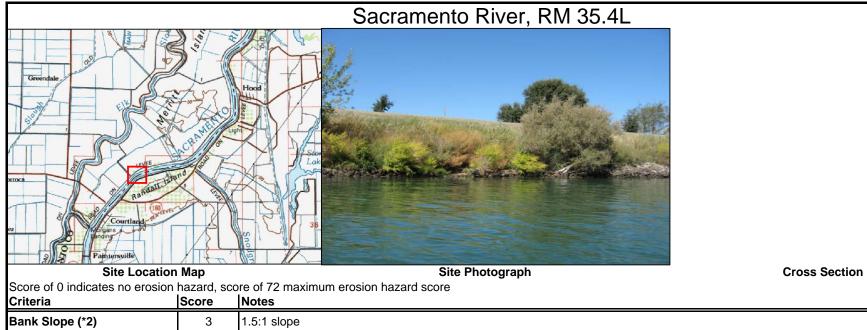
47

sand and silts

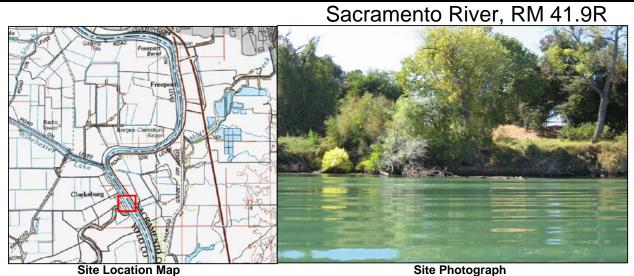
daily, parking area on levee, paths down, debris

Calculate Erosion Hazard

6.02 ft/s



Criteria	Score	Notes
Bank Slope (*2)	3	1.5:1 slope
Berm Width (*2) - Estimated	5	no berm
Location of erosion	4	toe
Bank Stability	5	vertical sections and caves
Site Relative to Bend	0	inside of a bend
Vegetation Cover	1	70%
Tree Hazard	1	young trees
Soil Type (*2)	4	sands and silts
Velocity (*2)	4	6.52 ft/s
Human Usage	4	weekly
Erosion Hazard	47	Calculate Erosion Hazard

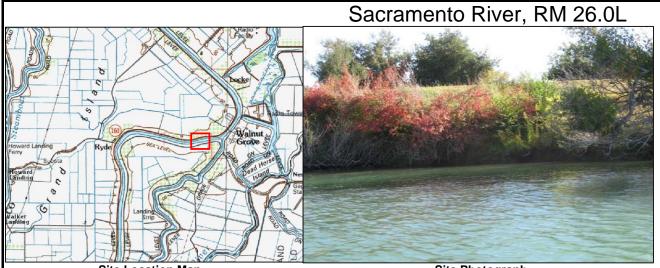


Score of 0 indicates no erosion hazard, score of 72 maximum erosion hazard score

Score Notes Criteria Bank Slope (\*2) 1.5:1 slope Berm Width (\*2) - Estimated 5 no berm Location of erosion 2 lower bank caves from fallen trees **Bank Stability** 1 Site Relative to Bend straight 1 60 to 70% Vegetation Cover 1 5 large trees with exposed roots and leaning Tree Hazard Soil Type (\*2) 4 sands and silts 5.08 ft/s Velocity (\*2) 4 adjacent to road, pathway down, weekly Human Usage 4 46 Calculate Erosion Hazard **Erosion Hazard** 

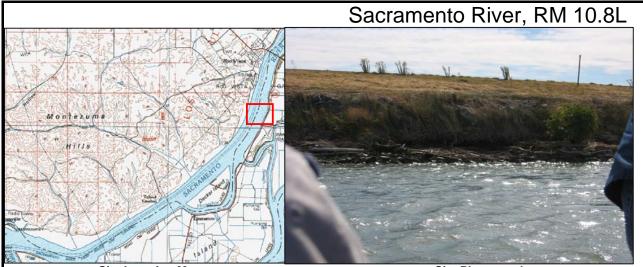


Criteria	Score	Notes
Bank Slope (*2)	2	2:1 slope
Berm Width (*2) - Estimated	5	no berm
Location of erosion	5	toe and underwater
Bank Stability	4	vertical sections greater than half bank height
Site Relative to Bend	3	outside of a greater than 90 degree bend
Vegetation Cover	2	50%
Tree Hazard	1	lone small tree
Soil Type (*2)	4	sands and silts
Velocity (*2)	4	6.52 ft/s
Human Usage	1	steep sections, occassioanl usage
Erosion Hazard	46	Calculate Erosion Hazard



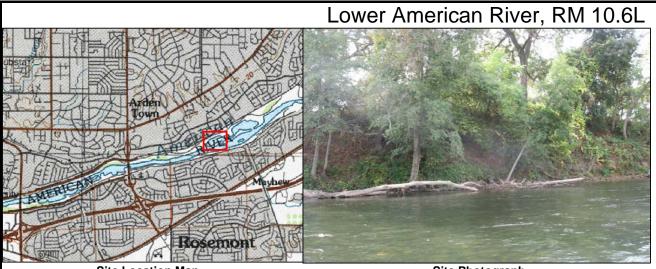
Site Location Map
Site Photograph
Score of 0 indicates no erosion hazard, score of 72 maximum erosion hazard score

Criteria	Score	Notes
Bank Slope (*2)	4	1:1 or less
Berm Width (*2) - Estimated	5	0 to 50 ft
Location of erosion	5	bank, toe, and underwater
Bank Stability	4	vertical sections, greater than half bank height
Site Relative to Bend	1	straight
Vegetation Cover	1	70 to 80%
Tree Hazard	4	trees with exposed roots
Soil Type (*2)	2	clays and silts
Velocity (*2)	4	5.13 ft/s
Human Usage	1	occassional
Erosion Hazard	46	Calculate Erosion Hazard



Site Location Map Site Photograph Cross Section
Score of 0 indicates no erosion hazard, score of 72 maximum erosion hazard score

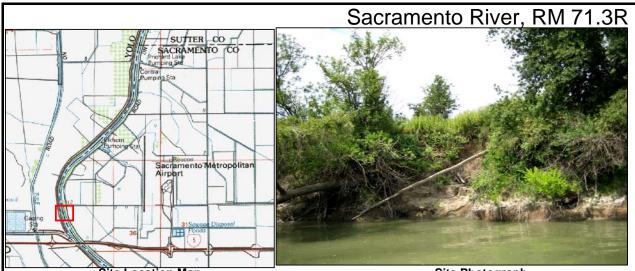
Criteria	Score	Notes
Bank Slope (*2)	4	1:1 slope
Berm Width (*2) - Estimated	5	no berm
Location of erosion	1	mid bank
Bank Stability	2	vertical sections, less than half bank height
Site Relative to Bend	1	straight
Vegetation Cover	3	varies, 30 to 60 %
Tree Hazard	0	no trees
Soil Type (*2)	4	sands and silts
Velocity (*2)	4	7.05 ft/s
Human Usage	5	path and trash, daily
Erosion Hazard	46	Calculate Erosion Hazard



Site Location Map Site Photograph Cross Section

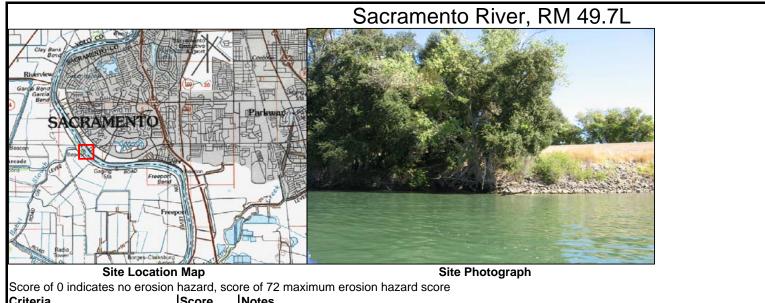
Score of 0 indicates no erosion hazard, score of 72 maximum erosion hazard score

Criteria	Score	Notes
Bank Slope (*2)	5	near vertical
Berm Width (*2) - Estimated	2	15 to 20 ft
Location of erosion	2	whole bank
Bank Stability	5	tree popouts and vertical sections
Site Relative to Bend	1	straight
Vegetation Cover	1	80%
Tree Hazard	5	large trees, exposed roots, and leaning
Soil Type (*2)	4	sands and silts
Velocity (*2)	3	3.94 ft/s
Human Usage	4	weekly, trails
Erosion Hazard	46	Calculate Erosion Hazard

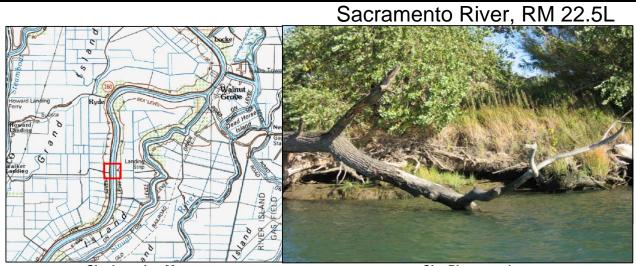


Site Location Map
Score of 0 indicates no erosion hazard, score of 72 maximum erosion hazard score

	Score	Notes
Bank Slope (*2)	4	1:1 slope
Berm Width (*2) - Estimated	1	25 ft
Location of erosion	4	berm and toe
Bank Stability	5	vertical sections, greater than half bank height and animal burrows
Site Relative to Bend	1	straight
Vegetation Cover	2	50%
Tree Hazard	5	trees with exposed roots and leaning
Soil Type (*2)	4	sands and silts
Velocity (*2)	4	5.05 ft/s
Human Usage	2	seasonal
Erosion Hazard	45	Calculate Erosion Hazard

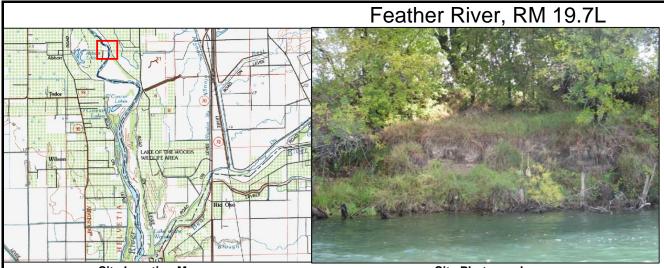


Criteria	Score	Notes
Bank Slope (*2)	3	1.5:1 slope
Berm Width (*2) - Estimated	2	10 ft of berm
Location of erosion	5	bank, toe, and underwater
Bank Stability	2	some small vertical sections
Site Relative to Bend	1	straight
Vegetation Cover	1	60%
Tree Hazard	4	large trees with exposed roots
Soil Type (*2)	5	silts
Velocity (*2)	4	5.6 ft/s (UNET)
Human Usage	4	bike path on top, weekly
Erosion Hazard	45	Calculate Erosion Hazard



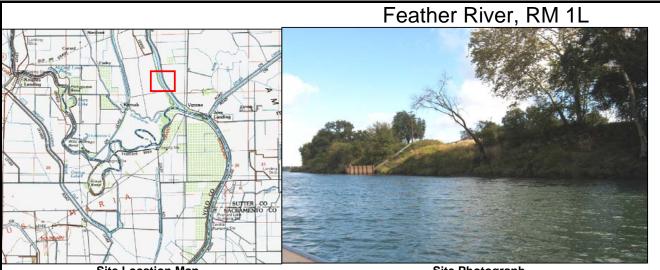
Site Location Map
Site Photograph
Cross Section
Score of 0 indicates no erosion hazard, score of 72 maximum erosion hazard score
Criteria
IScore | Notes

Criteria	Score	Notes
Bank Slope (*2)	4	1:1 slope
Berm Width (*2) - Estimated	2	10 ft
Location of erosion	4	berm and toe
Bank Stability	5	caves, less than 4 ft, and vertical sections
Site Relative to Bend	1	straight
Vegetation Cover	0	90%
Tree Hazard	5	large leaning trees, exposed roots
Soil Type (*2)	4	sands and silts
Velocity (*2)	3	4.54 ft/s
Human Usage	4	weekly, path and picnic table
Erosion Hazard	45	Calculate Erosion Hazard



Site Location Map Site Photograph Cross Section
Score of 0 indicates no erosion hazard, score of 72 maximum erosion hazard score

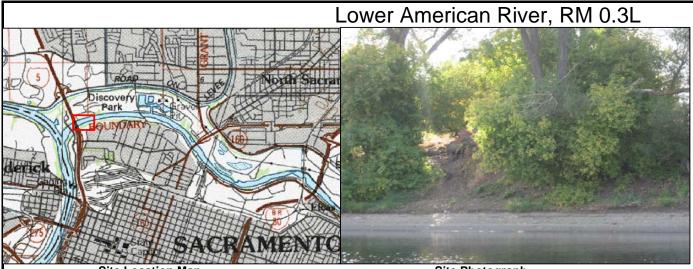
Criteria	,	Notes	
Bank Slope (*2)	4	1:1 slope or less	
Berm Width (*2) - Estimated	0	50 ft	
Location of erosion	4	whole bank and toe	
Bank Stability	5	caves, greater than 4 ft and vertical sections	
Site Relative to Bend	3	outside of a greater than 90 degree bend	
Vegetation Cover	3	40 to 50%	
Tree Hazard	5	arge trees with exposed roots and trees sliding down the bank	
Soil Type (*2)	4	ands and silts	
Velocity (*2)	4	5.34 ft/s	
Human Usage	1	rather steep, not too accessible, occassional	
Erosion Hazard	45	Calculate Erosion Hazard	



Site Location Map Site Photograph Cross Section

Criteria	Score	Notes
Score of 0 indicates no erosion	า hazard	. score of 72 maximum erosion hazard score

Cilicia	ocol e	Notes
Bank Slope (*2)	4	1:1 slope
Berm Width (*2) - Estimated	2	15 ft
Location of erosion	5	toe and underwater
Bank Stability	2	vertical sections, less than half bank slope height
Site Relative to Bend	1	straight
Vegetation Cover	0	dense on bank, about 80%
Tree Hazard	4	trees with visible roots
Soil Type (*2)	4	sands and silts
Velocity (*2)	4	5.46 ft/s
Human Usage	5	frequent, trails down to bank
Erosion Hazard	45	Calculate Erosion Hazard

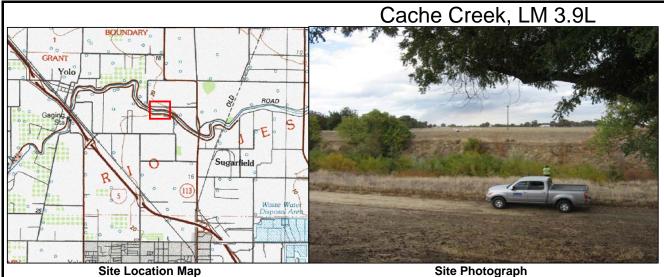


Site Location Map Site Photograph Cross Section

Criteria	Score	Notes
Score of U indicates no erosion	nazard, sco	ore of 72 maximum erosion hazard score

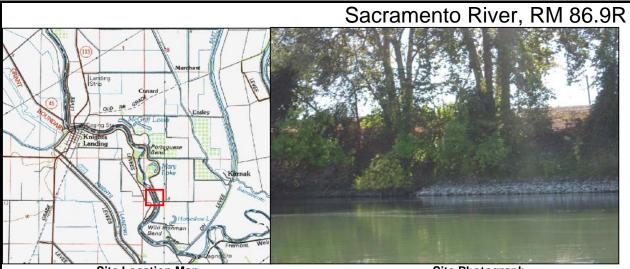
Officia	00010	Hotes
Bank Slope (*2)	3	1.5:1 slope
Berm Width (*2) - Estimated	3	6 to 30 ft
Location of erosion	4	bank and toe
Bank Stability	0	no stability issues
Site Relative to Bend	0	inside of a slight bend
Vegetation Cover	3	about 40 %
Tree Hazard	5	large trees with exposed roots, some leaning
Soil Type (*2)	4	sands and silts
Velocity (*2)	4	5.2 ft/s
Human Usage	5	Bike path on top os levee, trails down, trash present, daily use
Fracion Hazard	45	Coloulate Erecion Hazard

Erosion Hazard 45 Calculate Erosion Hazard



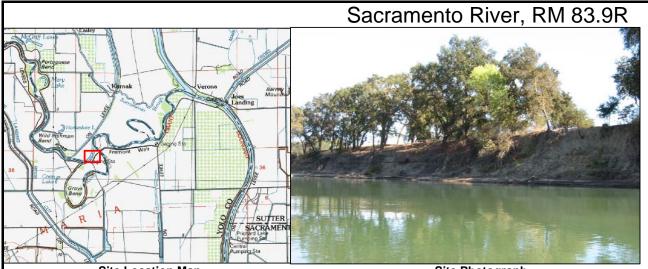
Site Location Map
Score of 0 indicates no erosion hazard, score of 72 maximum erosion hazard score
Criteria

Criteria	Score	Notes
Bank Slope (*2)	4	less than 1:1
Berm Width (*2) - Estimated	2	10 to 25 ft
Location of erosion	4	whole bank and toe
Bank Stability	5	vertical sections and caves
Site Relative to Bend	1	straight
Vegetation Cover	3	30%
Tree Hazard	4	large trees with exposed roots
Soil Type (*2)	4	sands and silts
Velocity (*2)	4	6 ft/s
Human Usage	0	rare
Erosion Hazard	45	Calculate Erosion Hazard



**Cross Section** Site Location Map Site Photograph Score of 0 indicates no erosion hazard, score of 72 maximum erosion hazard score

Criteria	Score	Notes	
Bank Slope (*2)	4	1.5:1 slope	
Berm Width (*2) - Estimated	1	25 30 ft	
Location of erosion	5	toe and underwater	
Bank Stability	2	vertical sections, less than half bank height	
Site Relative to Bend	1	straight	
Vegetation Cover	3	30%	
Tree Hazard	5	large trees, roots exposed and leaning	
Soil Type (*2)	4	sands and silts	
Velocity (*2)	3	3.18 ft/s	
Human Usage	4	weekly, trail to bank	
Erosion Hazard	44	Calculate Erosion Hazard	



Site Location Map
Score of 0 indicates no erosion hazard, score of 72 maximum erosion hazard score

Cross Section

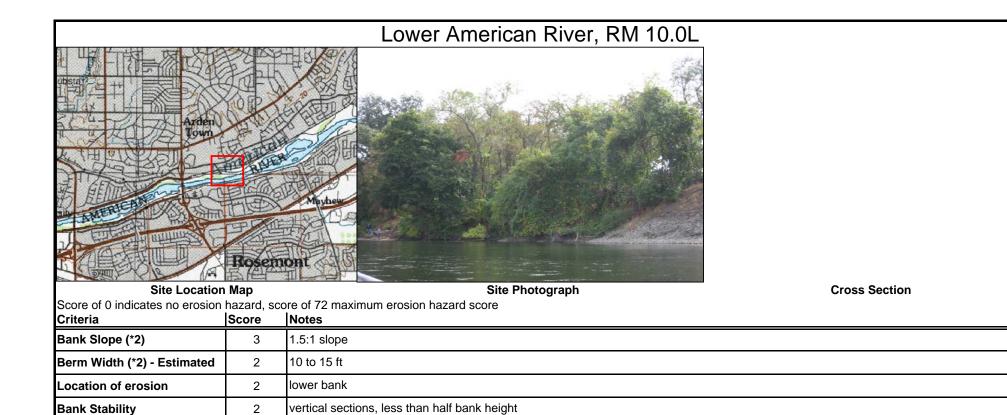
Criteria	Score	Notes	
Bank Slope (*2)	5	vertical bank	
Berm Width (*2) - Estimated	0	40 to 50 ft	
Location of erosion	3	full bank	
Bank Stability	5	beaver burrows and vertical bank	
Site Relative to Bend	2	just downstream of a bend	
Vegetation Cover	4	10%	
Tree Hazard	5	arge trees with exposed roots and leaning	
Soil Type (*2)	4	sands and silts	
Velocity (*2)	2	2.15 ft/s	
Human Usage	3	monthly, trail but not easy to access	
Erosion Hazard	44	Calculate Erosion Hazard	



Site Location Map Site Photograph Cross Section
Score of 0 indicates no erosion hazard, score of 72 maximum erosion hazard score

Criteria	Score	Notes
Bank Slope (*2)	2	2:1 slope
Berm Width (*2) - Estimated	5	0 to 10 ft
Location of erosion	3	toe
Bank Stability	0	no vertical sections or caves
Site Relative to Bend	1	straight
Vegetation Cover	1	70%
Tree Hazard	4	large trees with exposed roots
Soil Type (*2)	4	sands and silts
Velocity (*2)	4	5.02 ft/s
Human Usage	5	daily
Frosion Hazard	44	Calculate Erosion Hazard

Erosion Hazard 44 Calculate Erosion Hazar



straight

8.74 ft/s

sands and silts

large trees, some exposed roots, some leaning

daily, people on banks, lots of trash and paths

Calculate Erosion Hazard

60%

1

1

5

4

5

5

44

Site Relative to Bend

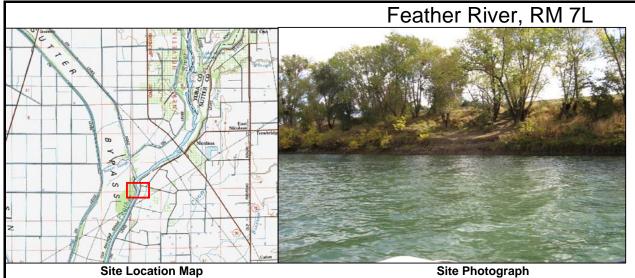
Vegetation Cover

Tree Hazard
Soil Type (\*2)

Velocity (\*2)

Human Usage

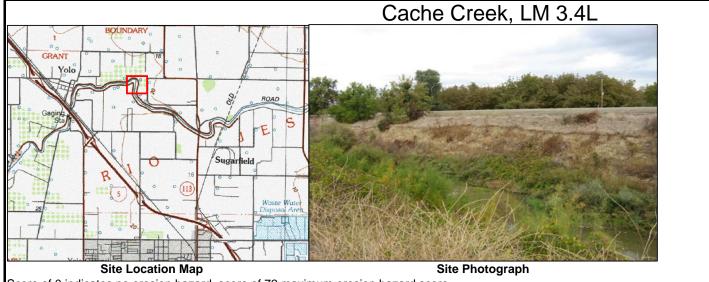
**Erosion Hazard** 



Site Location Map

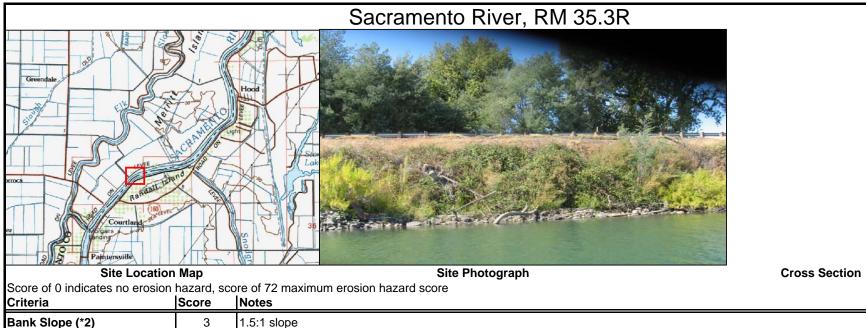
Score of 0 indicates no erosion hazard, score of 72 maximum erosion hazard score

Criteria	Score	Notes
Bank Slope (*2)	1	2.5:1 on bank
Berm Width (*2) - Estimated	3	about 5 ft
Location of erosion	3	toe
Bank Stability	2	vertical sections, less than half bank slope
Site Relative to Bend	3	outside of a greater than 90 degree bend
Vegetation Cover	2	40 to 50 %
Tree Hazard	3	large trees
Soil Type (*2)	4	sands and silts with cobbles underneath
Velocity (*2)	5	9.97 ft/s
Human Usage	5	multiple paths down the bank and trash
Erosion Hazard	44	Calculate Erosion Hazard



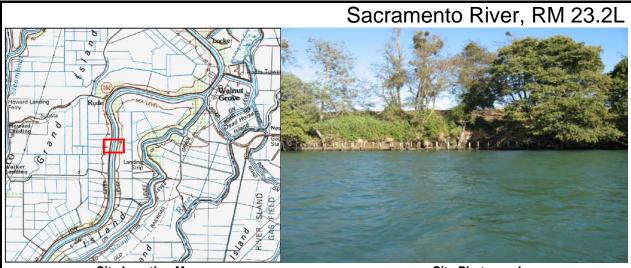
Score of 0 indicates no erosion hazard, score of 72 maximum erosion hazard score

Notes Criteria Score Bank Slope (\*2) 1:1 slope 15 to 30 feet Berm Width (\*2) - Estimated 2 Location of erosion 4 toe and upper bank vertical sections, less than half slope height, and caves **Bank Stability** 5 Site Relative to Bend outside of a less than 90 degree bend 5 40% Vegetation Cover 2 0 Tree Hazard no trees Soil Type (\*2) 4 sands and silts 6.5 ft/s Velocity (\*2) 4 Human Usage adjacent to private property, rare usage 0 44 Calculate Erosion Hazard **Erosion Hazard** 



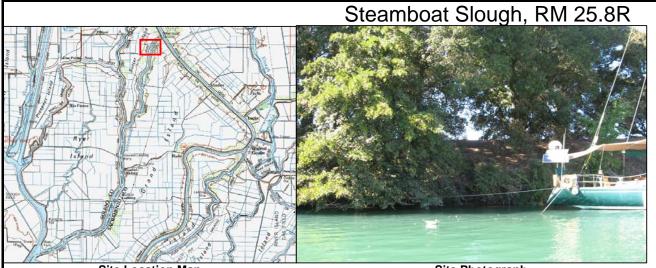
Bank Slope (\*2) 1.5:1 slope Berm Width (\*2) - Estimated 5 no berm Location of erosion 2 full bnak **Bank Stability** 0 no vertical sections or caves Site Relative to Bend outside of a greater than 90 degree bend 3 60% Vegetation Cover 1 0 no trees Tree Hazard Soil Type (\*2) 4 sands and silts Velocity (\*2) 4 5.89 ft/s Human Usage 5 daily

Erosion Hazard 43 Calculate Erosion Hazard



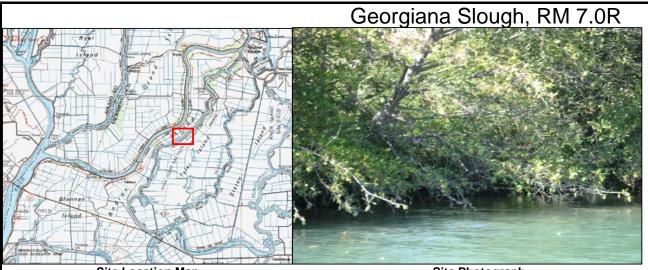
Site Location Map Site Photograph Cross Section
Score of 0 indicates no erosion hazard, score of 72 maximum erosion hazard score

Criteria		Notes
Bank Slope (*2)	4	1:1 slope
Berm Width (*2) - Estimated	2	10 ft
Location of erosion	2	berm
Bank Stability	5	short vertical sections and caves
Site Relative to Bend	1	straight
Vegetation Cover	1	60 to 70 %
Tree Hazard	4	medium trees, exposed roots
Soil Type (*2)	4	sands and silts
Velocity (*2)	3	4.16 ft/s
Human Usage	4	weekly, path down
Erosion Hazard	43	Calculate Erosion Hazard



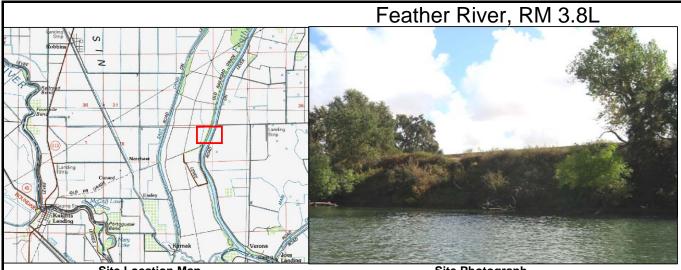
Site Location Map
Score of 0 indicates no erosion hazard, score of 72 maximum erosion hazard score

Criteria	Score	Notes
Bank Slope (*2)	3	1.5:1 slope
Berm Width (*2) - Estimated	5	no berm
Location of erosion	4	toe and lower bank
Bank Stability	2	vertical sections
Site Relative to Bend	3	outside of slight bend
Vegetation Cover	1	60 - 70%
Tree Hazard	4	large trees, exposed roots
Soil Type (*2)	2	clays and silts
Velocity (*2)	3	4.87 ft/s
Human Usage	3	monthly
Frosion Hazard	43	Calculate Frosion Hazard



Site Location Map
Site Photograph
Score of 0 indicates no erosion hazard, score of 72 maximum erosion hazard score

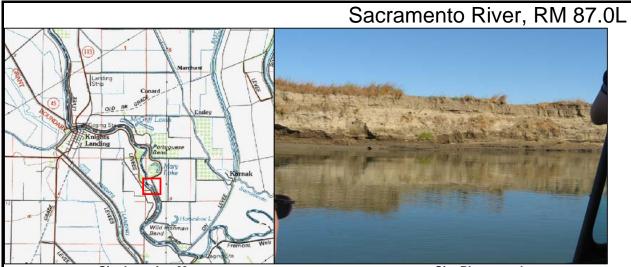
Criteria	Score	Notes
Bank Slope (*2)	4	1:1 or less
Berm Width (*2) - Estimated	3	5 ft
Location of erosion	4	toe and bank
Bank Stability	2	vertical sections, less than half bank height
Site Relative to Bend	1	straight
Vegetation Cover	2	60%
Tree Hazard	4	large trees, exposed roots
Soil Type (*2)	4	sands and silts
Velocity (*2)	3	3.88 ft/s
Human Usage	2	seasonal
Erosion Hazard	43	Calculate Erosion Hazard



Site Photograph

Site Location Map
Score of 0 indicates no erosion hazard, score of 72 maximum erosion hazard score
Criteria | Score | Notes

Criteria	Score	Notes
Bank Slope (*2)	4	1:1 slope
Berm Width (*2) - Estimated	1	25 to 30 ft
Location of erosion	3	whole bank
Bank Stability	3	some holes from trees falling
Site Relative to Bend	1	straight
Vegetation Cover	1	70 to 80%
Tree Hazard	5	large trees with visible roots, some leaning
Soil Type (*2)	4	sands and silts
Velocity (*2)	4	7.08 ft/s
Human Usage	4	adjacent to road, weekly use
Erosion Hazard	43	Calculate Erosion Hazard

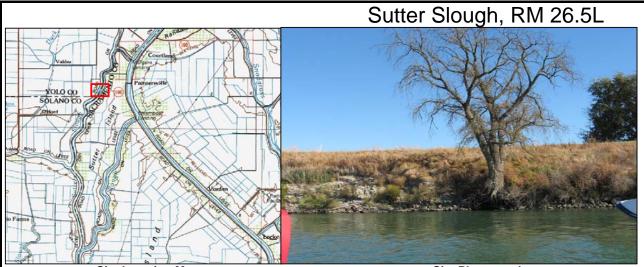


Site Location Map
Score of 0 indicates no erosion hazard, score of 112 maximum erosion hazard score

Criteria	Score	Notes
Bank Slope (*2)	5	near vertical
Berm Width (*2) - Estimated	0	40 to 50 ft
Location of erosion	4	full bank and toe
Bank Stability	5	vertical sections greater than half bank height, and animal holes
Site Relative to Bend	0	inside of a bend
Vegetation Cover	4	10%
Tree Hazard	4	trees with exposed roots, one freshly fallen
Soil Type (*2)	4	sands and silts
Velocity (*2)	3	3.18 ft/s
Human Usage	1	occassional
Erecien Horord	42	Coloulate Erecian Hozard

**Cross Section** 

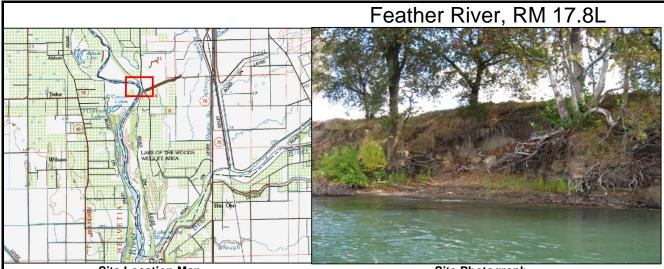
Erosion Hazard 42 Calculate Erosion Hazard



Site Location Map
Score of 0 indicates no erosion hazard, score of 72 maximum erosion hazard score

Score of 0 indicates no erosion hazard, score of 72 maximum erosion hazard score

Criteria	Score	Notes
Bank Slope (*2)	3	1.5:1 slope
Berm Width (*2) - Estimated	5	no berm
Location of erosion	3	toe
Bank Stability	0	no vertical sections or caves
Site Relative to Bend	1	straight
Vegetation Cover	2	50%
Tree Hazard	5	leaning trees with exposed roots
Soil Type (*2)	2	clays and silts
Velocity (*2)	4	5.62 ft/s
Human Usage	3	monthly
Erosion Hazard	42	Calculate Erosion Hazard



Site Location Map Site Photograph Cross Section

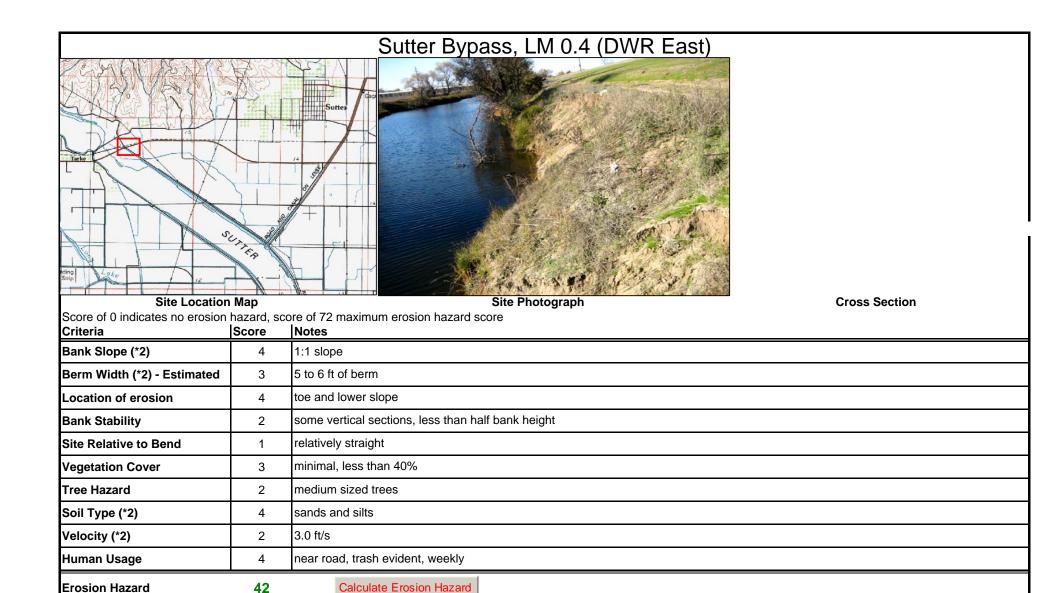
Score of 0 indicates no erosion hazard, score of 72 maximum erosion hazard score

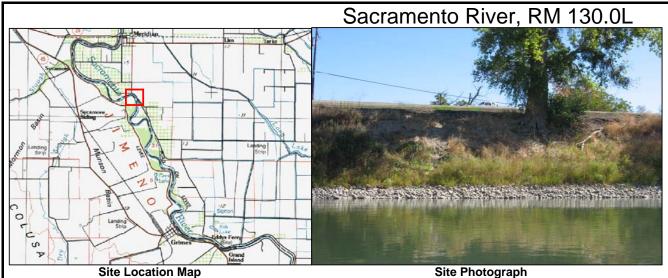
Criteria	Score	Notes
Bank Slope (*2)	4	1:1 slope
Berm Width (*2) - Estimated	0	50 ft
Location of erosion	3	whole bank
Bank Stability	4	vertical sections for whole bank height
Site Relative to Bend	5	outside of a slightly less than 90 degree bend
Vegetation Cover	2	about 40 to 50%
Tree Hazard	5	large trees, roots exposed, and leaning
Soil Type (*2)	4	sands and silts
Velocity (*2)	3	4.63 ft/s
Human Usage	1	Dumping spot but not much usage
Erosion Hazard	42	Calculate Erosion Hazard



Notes Criteria Score Bank Slope (\*2) near vertical Berm Width (\*2) - Estimated 5 no berm toe and lower slope Location of erosion 4 **Bank Stability** 2 shallow vertical sections Site Relative to Bend straight 1 Vegetation Cover minimal 4 0 no trees Tree Hazard Soil Type (\*2) 4 sands and silts Velocity (\*2) 0 water does not reach the bank Human Usage monthly usage 3

Erosion Hazard 42 Calculate Erosion Hazard





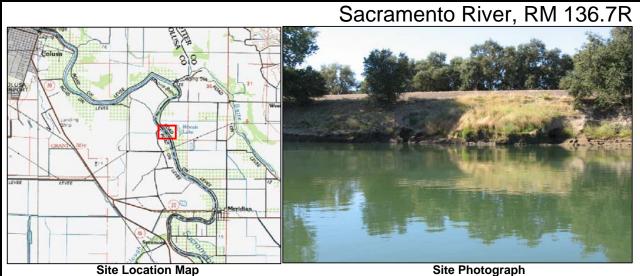
Score of 0 indicates no erosion hazard, score of 72 maximum erosion hazard score

Criteria | Score | Notes

Criteria	Score	Notes
Bank Slope (*2)	3	1.5:1 slope
Berm Width (*2) - Estimated	5	0 to 60 ft
Location of erosion	4	berm slope and toe
Bank Stability	0	no vertical sections or caves
Site Relative to Bend	5	outside of a tight bend
Vegetation Cover	2	50%
Tree Hazard	4	large trees with exposed roots
Soil Type (*2)	2	clays and silts
Velocity (*2)	2	2.86 ft/s
Human Usage	2	seasonal
F	44	Orbital Construction II annual

**Cross Section** 

41 **Erosion Hazard** Calculate Erosion Hazard



Calculate Erosion Hazard

Score of 0 indicates no erosion hazard, score of 72 maximum erosion hazard score

41

**Erosion Hazard** 

Score Notes Criteria Bank Slope (\*2) 1.5:1 slope 30 ft Berm Width (\*2) - Estimated 0 Location of erosion 4 bank and toe vertical sections, greater than half bank height and caves **Bank Stability** 5 Site Relative to Bend 2 just downstream from a bend 20% Vegetation Cover 4 trees with exposed roots and leaning Tree Hazard 5 Soil Type (\*2) 2 clays and silts Velocity (\*2) 4 5.17 ft/s Human Usage 3 monthly







Site Location Map

Site Photograph

**Cross Section** 

Score of 0 indicates no erosion	hazard, sco	ore of 72 maximum erosion hazard score
Criteria	Score	Notes
Bank Slope (*2)	4	1:1 slope

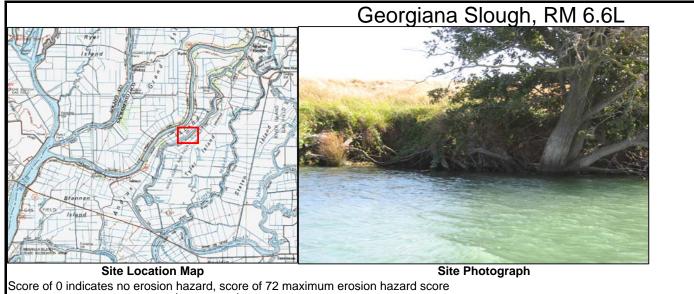
Bank Slope (*2)	4	1:1 slope
Berm Width (*2) - Estimated	0	30 ft
Location of erosion	4	bank and toe
Bank Stability	4	vertical sections, greater than half bank height
Site Relative to Bend	1	straight
Vegetation Cover	4	10%
Tree Hazard	5	large trees with exposed roots, some leaning
Soil Type (*2)	4	sands and silts
Velocity (*2)	3	4.3 ft/s
Human Usage	1	occassional
Erosion Hazard	41	Calculate Erosion Hazard



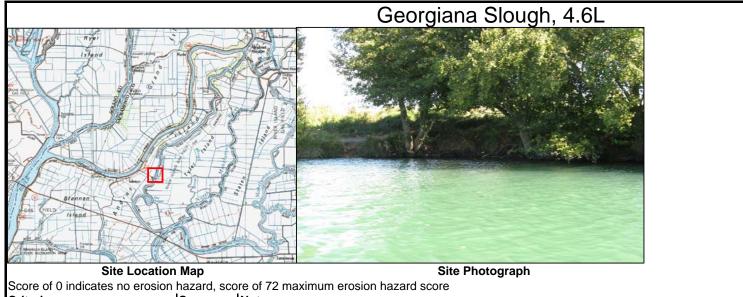
Site Location Map
Score of 0 indicates no erosion hazard, score of 72 maximum erosion hazard score

Score of 0 indicates no erosion hazard, score of 72 maximum erosion hazard score

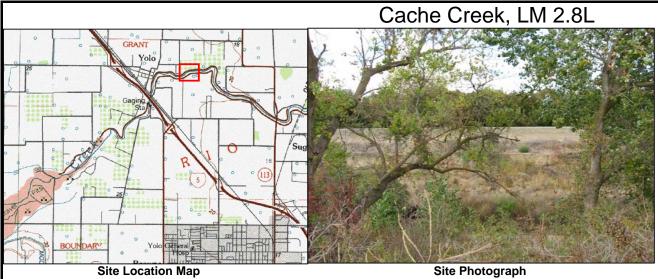
Criteria	Score	Notes
Bank Slope (*2)	3	1.5:1 slope
Berm Width (*2) - Estimated	5	no berm
Location of erosion	2	berm
Bank Stability	4	vertical sections greater than half bank height
Site Relative to Bend	1	straight
Vegetation Cover	0	90%
Tree Hazard	3	large trees, one already fallen
Soil Type (*2)	4	sands and silts
Velocity (*2)	3	4.82 ft/s
Human Usage	1	occassional
Erosion Hazard	41	Calculate Erosion Hazard



Criteria	Score	Notes
Bank Slope (*2)	4	1:1 slope
Berm Width (*2) - Estimated	2	10 ft
Location of erosion	2	lower bank
Bank Stability	5	caves greater than 4 ft and vertical sections
Site Relative to Bend	1	straight
Vegetation Cover	4	70%
Tree Hazard	1	young trees
Soil Type (*2)	4	sands and silts
Velocity (*2)	3	3.77 ft/s
Human Usage	2	seasonal
Frosion Hazard	<u>4</u> 1	Calculate Frosion Hazard

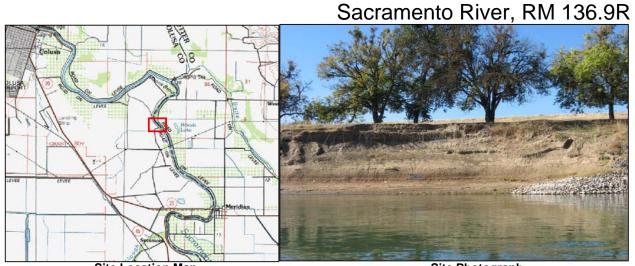


Criteria	Score	Notes
Bank Slope (*2)	3	1.5:1 slope
Berm Width (*2) - Estimated	4	less than 5 ft
Location of erosion	3	toe
Bank Stability	4	cvertical sections
Site Relative to Bend	1	straight
Vegetation Cover	0	85%
Tree Hazard	5	trees with exposed roots and leaning
Soil Type (*2)	4	sands and silts
Velocity (*2)	3	3.94 ft/s
Human Usage	0	too steep for access
Erosion Hazard	41	Calculate Erosion Hazard



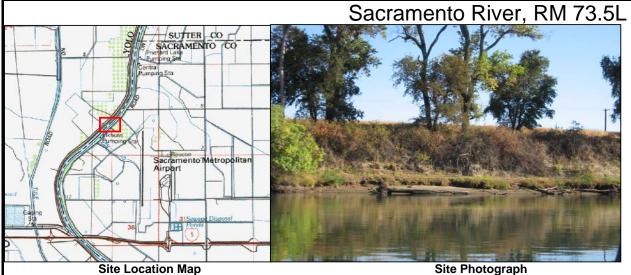
Score of 0 indicates no erosion hazard, score of 72 maximum erosion hazard score

Criteria	Score	Notes
Bank Slope (*2)	4	1:1 or less
Berm Width (*2) - Estimated	2	15 to 30 ft
Location of erosion	4	toe and upper bank slope
Bank Stability	4	vertical sections greater than half slope height
Site Relative to Bend	3	outside of gentle bend
Vegetation Cover	2	about 50%
Tree Hazard	0	no trees
Soil Type (*2)	4	sands and silts
Velocity (*2)	4	5.98 ft/s
Human Usage	0	private property adjacent, rare usage
Erosion Hazard	41	Calculate Erosion Hazard



Site Location Map
Score of 0 indicates no erosion hazard, score of 72 maximum erosion hazard score

Notes Criteria Score Bank Slope (\*2) 1:1 slope 30 ft Berm Width (\*2) - Estimated 0 Location of erosion 4 whole bank and toe vertical sections less than half bank height and caves **Bank Stability** 5 Site Relative to Bend 2 just downstream from a bend 20% Vegetation Cover 4 large trees with exposed roots Tree Hazard 4 Soil Type (\*2) 2 clays and silts Velocity (\*2) 3 4.66 ft/s Human Usage 3 monthly **Erosion Hazard** 40 Calculate Erosion Hazard



Site Location Map
Site Photograph
Score of 0 indicates no erosion hazard, score of 72 maximum erosion hazard score

Notes Criteria Score Bank Slope (\*2) 1:1 slope 30 to 50 ft Berm Width (\*2) - Estimated 0 Location of erosion 2 full bank vertical sections, greater than half bnak height and caves **Bank Stability** 5 straight Site Relative to Bend 1 30% Vegetation Cover 3 3 large trees Tree Hazard Soil Type (\*2) 2 clays and silts Velocity (\*2) 3 4.74 ft/s Human Usage 4 weekly

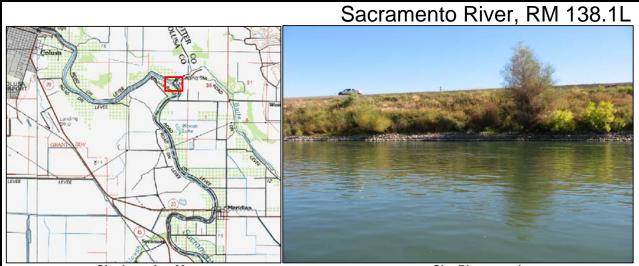
**Cross Section** 

Erosion Hazard 36 Calculate Erosion Hazard



Score of 0 indicates no erosion hazard, score of 72 maximum erosion hazard score

Criteria	Score	Notes
Bank Slope (*2)	2	2:1 slope
Berm Width (*2) - Estimated	5	0 to 15 ft
Location of erosion	3	toe
Bank Stability	1	caves from tree popouts
Site Relative to Bend	1	relatively straight
Vegetation Cover	1	70 to 80%
Tree Hazard	4	large trees with exposed roots
Soil Type (*2)	4	sands and silts
Velocity (*2)	3	4.5 ft/s (UNET)
Human Usage	2	seasonal
Erosion Hazard	40	Calculate Erosion Hazard



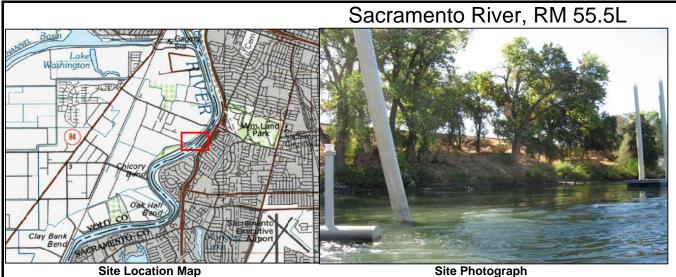
Site Location Map
Site Photograph
Cross Section
Score of 0 indicates no erosion hazard, score of 72 maximum erosion hazard score

Criteria	Score	Notes
Bank Slope (*2)	4	1:1 slope
Berm Width (*2) - Estimated	5	no berm
Location of erosion	4	toe and lower bank
Bank Stability	2	vertical section, less than half bank height
Site Relative to Bend	3	outside of gentle bend
Vegetation Cover	1	75%
Tree Hazard	0	no trees
Soil Type (*2)	2	clays and silts
Velocity (*2)	2	2.58 ft/s
Human Usage	3	monthly
Erosion Hazard	39	Calculate Erosion Hazard



Site Location Map
Site Photograph
Cross Section
Score of 0 indicates no erosion hazard, score of 72 maximum erosion hazard score

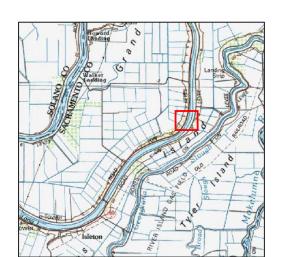
Criteria	Score	Notes
Bank Slope (*2)	2	2:1 slope
Berm Width (*2) - Estimated	3	8 to 10 ft
Location of erosion	2	full bank
Bank Stability	2	vertical sections, less than half bank height
Site Relative to Bend	0	inside of a bend
Vegetation Cover	3	30%
Tree Hazard	3	large trees
Soil Type (*2)	4	sands and silts
Velocity (*2)	3	3.41 ft/s
Human Usage	5	campground adjacent
Erosion Hazard	39	Calculate Erosion Hazard



Score of 0 indicates no erosion hazard, score of 72 maximum erosion hazard score

Criteria | Score | Notes

Criteria	Score	Notes
Bank Slope (*2)	3	1.5:1 slope
Berm Width (*2) - Estimated	2	15 ft
Location of erosion	2	levee slope
Bank Stability	2	small vertical section
Site Relative to Bend	1	relatively straight
Vegetation Cover	2	40%
Tree Hazard	3	large trees
Soil Type (*2)	4	sands and silts
Velocity (*2)	3	4.84 ft/s
Human Usage	5	paths and human debris, adjacent to hotel
Erosion Hazard	39	Calculate Erosion Hazard

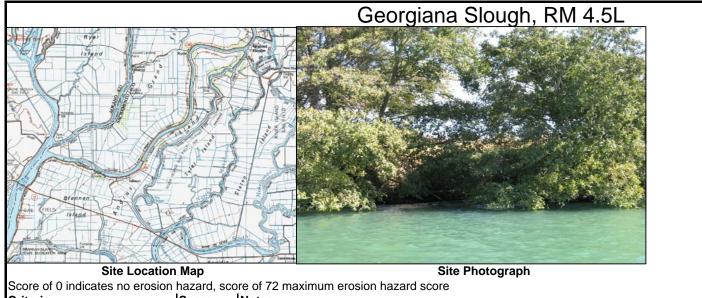


## Sacramento River, RM 21.5L

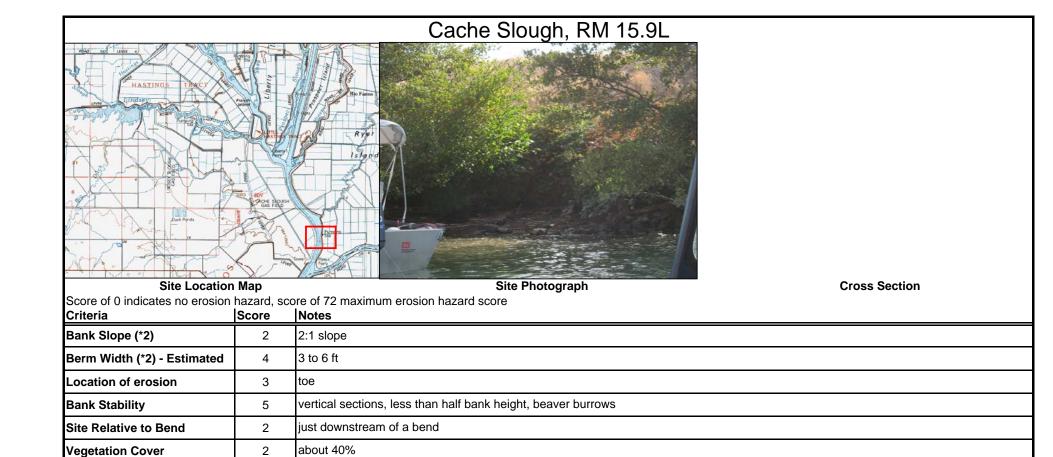


Site Location Map Site Photograph

One Location	•	Olio i notograpii	0.000 000.001
Score of 0 indicates no erosion Criteria	hazard, so    Score	core of 72 maximum erosion hazard score  Notes	
Bank Slope (*2)	4	1.5:1 slope	
Berm Width (*2) - Estimated	3	5 ft of berm	
Location of erosion	2	mid and lower bank	
Bank Stability	0	no stabillity issues	
Site Relative to Bend	3	outside of a slight bend	
Vegetation Cover	0	90%	
Tree Hazard	5	large leaning trees, exposed roots	
Soil Type (*2)	4	sands and silts	
Velocity (*2)	3	4.3 ft/s	
Human Usage	1	occassional, lots of veg	
Erosion Hazard	39	Calculate Erosion Hazard	



Criteria	Score	Notes	
Bank Slope (*2)	3	1.5:1 slope	
Berm Width (*2) - Estimated	4	less than 5 ft	
Location of erosion	3	toe	
Bank Stability	2	some vertical sections, less than half bank height	
Site Relative to Bend	1	straight	
Vegetation Cover	0	dense, 95%	
Tree Hazard	5	treees with exposed roots and leaning	
Soil Type (*2)	4	sands and silts	
Velocity (*2)	3	4.01 ft/s	
Human Usage	0	too dense with vegetation for human use	
Erosion Hazard	39	Calculate Erosion Hazard	



0

1

5

3

39

no trees

10.9 ft/s

monthly

Calculate Erosion Hazard

clays

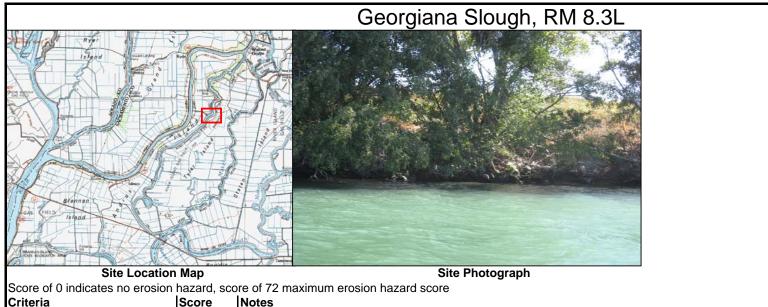
Tree Hazard

Soil Type (\*2)

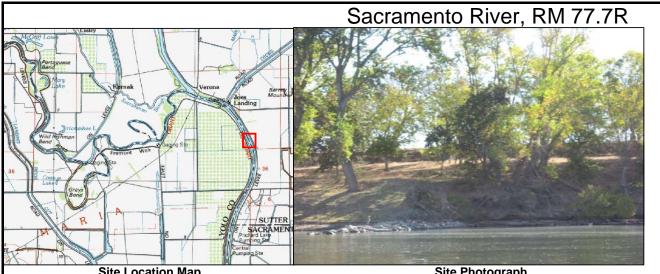
Velocity (\*2)

Human Usage

**Erosion Hazard** 



Criteria	Score	Notes	
Bank Slope (*2)	3	1.5:1 slope	
Berm Width (*2) - Estimated	2	15 ft	
Location of erosion	2	middle and lower bank	
Bank Stability	4	vertical sections, greater than half bank height	
Site Relative to Bend	4	outside of a 90 degree bend	
Vegetation Cover	1	80%	
Tree Hazard	0	no trees	
Soil Type (*2)	4	sands and silts	
Velocity (*2)	3	3.68 ft/s	
Human Usage	4	adjacent to public road, debris, weekly	
Erosion Hazard	39	Calculate Erosion Hazard	



Site Location Map Site Photograph Cross Section

Oultania	lo	INITE	
Score of 0 indicates no erosion	hazard, sc	ore of 72 maximum	erosion hazard score

Criteria	Score	Notes
Bank Slope (*2)	3	1.5:1 slope
Berm Width (*2) - Estimated	1	25 to 30 ft
Location of erosion	4	full bank and toe
Bank Stability	5	caves and some vertical sections
Site Relative to Bend	0	inside of bend
Vegetation Cover	2	30 to 40%
Tree Hazard	5	large trees with exposed roots and leaning
Soil Type (*2)	2	clays and silts
Velocity (*2)	5	5.08 ft/s plus eddy off adjacent rock
Human Usage	1	occassional
Erosion Hazard	39	Calculate Erosion Hazard



## Sacramento River, RM 116.5L



Site Location Map
Score of 0 indicates no erosion hazard, score of 72 maximum erosion hazard score

Site Photograph Cross Section

Criteria	Score	Notes
Bank Slope (*2)	3	1.5:1 slope
Berm Width (*2) - Estimated	2	10 ft
Location of erosion	4	berm and toe
Bank Stability	5	vertical sections, full bank height, lots of beaver holes
Site Relative to Bend	1	straight
Vegetation Cover	2	60%
Tree Hazard	0	no trees
Soil Type (*2)	4	sand and silts
Velocity (*2)	3	4.0 ft/s
Human Usage	2	seasonal
Erosion Hazard	38	Calculate Erosion Hazard



Site Location Map
Site Photograph
Score of 0 indicates no erosion hazard, score of 72 maximum erosion hazard score

Criteria	Score	Notes
Bank Slope (*2)	3	1.5:1 slope
Berm Width (*2) - Estimated	2	15 ft
Location of erosion	4	toe and bank
Bank Stability	2	vertical sections, less than half bank height
Site Relative to Bend	5	outside of a tight bend
Vegetation Cover	2	60%
Tree Hazard	0	no trees
Soil Type (*2)	4	sands and silts
Velocity (*2)	3	3.37 ft/s
Human Usage	1	daily, stairs and path down
Erosion Hazard	38	Calculate Erosion Hazard

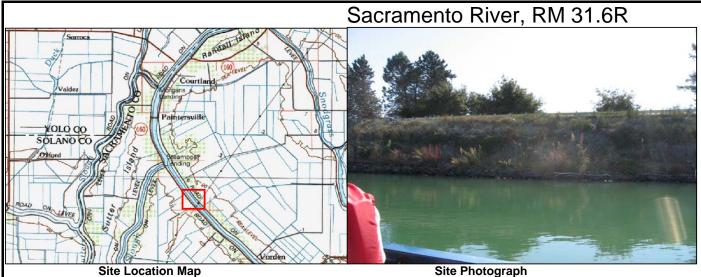


Criteria	Score	Notes
Bank Slope (*2)	3	1.5:1 slope
Berm Width (*2) - Estimated	0	30 to 40 ft
Location of erosion	4	lower bank and toe
Bank Stability	2	short vertical sections
Site Relative to Bend	1	straight
Vegetation Cover	2	60%
Tree Hazard	4	large trees with exposed roots
Soil Type (*2)	4	sands and silts
Velocity (*2)	3	4.88 ft/s
Human Usage	5	daily
Erosion Hazard	38	Calculate Erosion Hazard



Site Location Map
Site Photograph
Score of 0 indicates no erosion hazard, score of 72 maximum erosion hazard score
Scritoria | Score | Notes

Criteria	Score	Notes
Bank Slope (*2)	3	1.5:1 slope
Berm Width (*2) - Estimated	4	less than 5 ft
Location of erosion	4	lower bank and toe
Bank Stability	2	vertical sections, less than half bank slope
Site Relative to Bend	1	straight
Vegetation Cover	2	40-50%
Tree Hazard	0	no trees
Soil Type (*2)	2	clays and silts
Velocity (*2)	4	5.46 ft/s
Human Usage	3	monthly
Erosion Hazard	38	Calculate Erosion Hazard



Score of 0 indicates no erosion hazard, score of 72 maximum erosion hazard score

ograph Cross Section

Criteria	Score	Notes	
Bank Slope (*2)	3	1.5:1 slope	
Berm Width (*2) - Estimated	5	no berm	
Location of erosion	1	levee slope	
Bank Stability	0	no vertical sections or caves	
Site Relative to Bend	1	straight	
Vegetation Cover	1	70%	
Tree Hazard	0	no trees	
Soil Type (*2)	4	sands and silts	
Velocity (*2)	4	5.23 ft/s	
Human Usage	3	adjacent to road but no paths, monthly	
Erosion Hazard	38	Calculate Erosion Hazard	



**Cross Section** Score of 0 indicates no erosion hazard, score of 72 maximum erosion hazard score

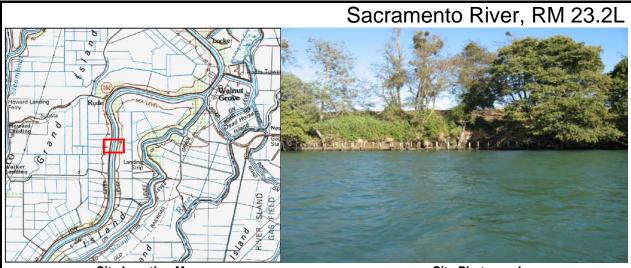
Criteria	Score	Notes
Bank Slope (*2)	3	1.5:1 slope
Berm Width (*2) - Estimated	3	5 ft
Location of erosion	4	lower bank and toe
Bank Stability	1	caves from tree popouts
Site Relative to Bend	0	inside of a bend
Vegetation Cover	3	40%
Tree Hazard	5	large trees, exposed roots and leaning
Soil Type (*2)	2	clays and silts
Velocity (*2)	3	4.76 ft/s
Human Usage	3	monthly
Erosion Hazard	38	Calculate Erosion Hazard



Site Location Map
Score of 0 indicates no erosion hazard, score of 72 maximum erosion hazard score

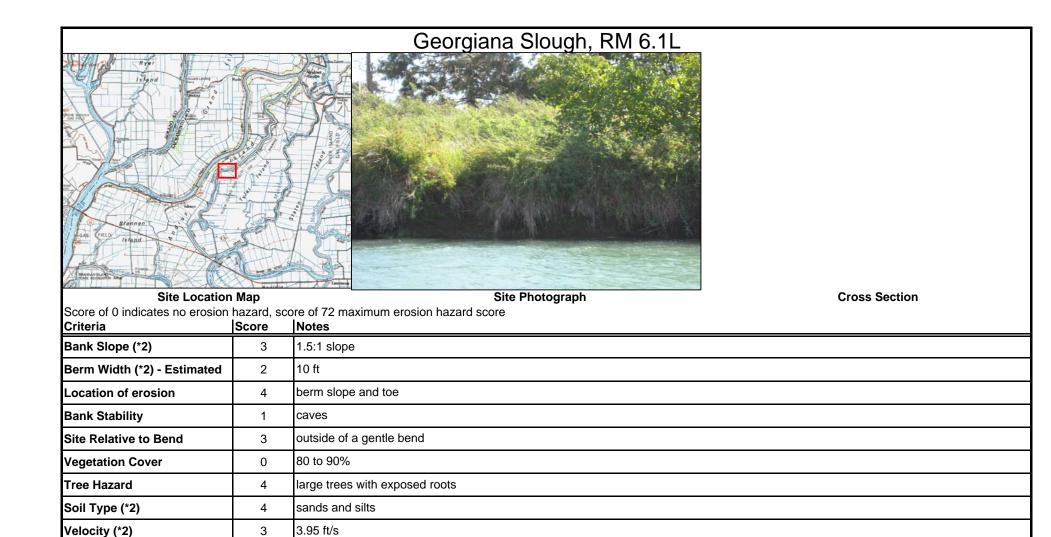
Score of 0 indicates no erosion hazard, score of 72 maximum erosion hazard score

Criteria	Score	Notes
Bank Slope (*2)	4	1:1 slope
Berm Width (*2) - Estimated	3	about 5 ft
Location of erosion	2	lower bank
Bank Stability	0	no vertical sections or caves
Site Relative to Bend	4	outside of a 90 degree bend
Vegetation Cover	0	90%
Tree Hazard	4	large trees with exposed roots
Soil Type (*2)	2	clays and silts
Velocity (*2)	3	4.45 ft/s
Human Usage	4	weekly
Erosion Hazard	38	Calculate Erosion Hazard



Site Location Map Site Photograph Cross Section
Score of 0 indicates no erosion hazard, score of 72 maximum erosion hazard score

Criteria		Notes
Bank Slope (*2)	4	1:1 slope
Berm Width (*2) - Estimated	2	10 ft
Location of erosion	2	berm
Bank Stability	5	short vertical sections and caves
Site Relative to Bend	1	straight
Vegetation Cover	1	60 to 70 %
Tree Hazard	4	medium trees, exposed roots
Soil Type (*2)	4	sands and silts
Velocity (*2)	3	4.16 ft/s
Human Usage	4	weekly, path down
Erosion Hazard	43	Calculate Erosion Hazard



3

2

38

seasonal

Calculate Erosion Hazard

Human Usage

**Erosion Hazard** 







Site Location Map

Site Photograph

**Cross Section** 

Score of 0 indicates no erosion hazard, score of 72 maximum erosion hazard score

Criteria	Score	Notes
Bank Slope (*2)	2	2:1 slope with some vertical sections
Berm Width (*2) - Estimated	1	25 to 30 ft
Location of erosion	3	whole bank
Bank Stability	2	vertical sections, less than half bank height
Site Relative to Bend	1	straight
Vegetation Cover	3	30 to 40 % cover
Tree Hazard	0	no trees in the erosion area
Soil Type (*2)	4	sands and silts
Velocity (*2)	5	10.6 ft/s
Human Usage	5	close to road, human debris evident
Erosion Hazard	38	Calculate Erosion Hazard

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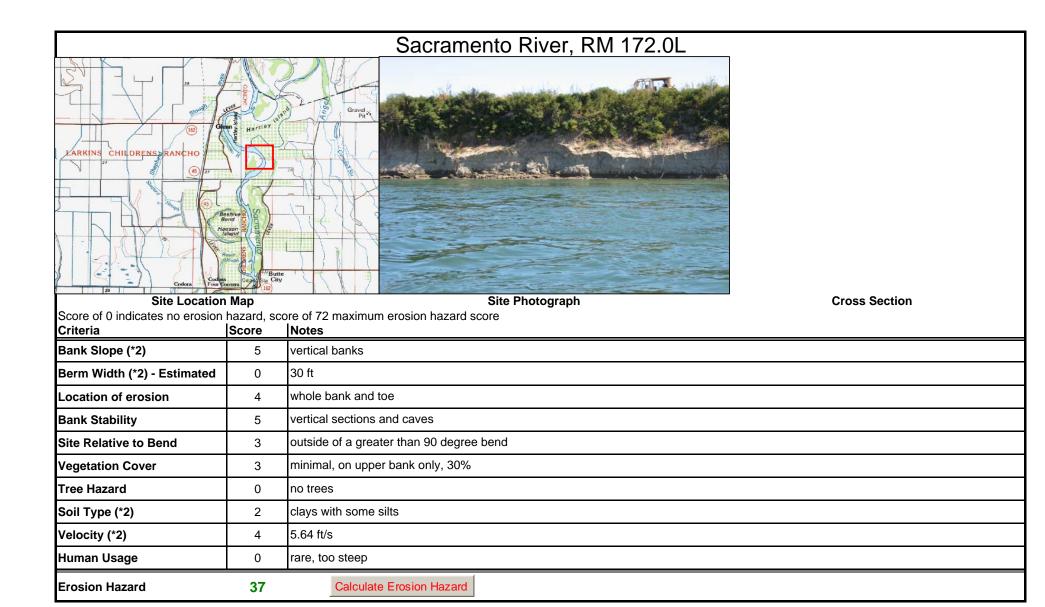
## Bear River, RM 0.8L

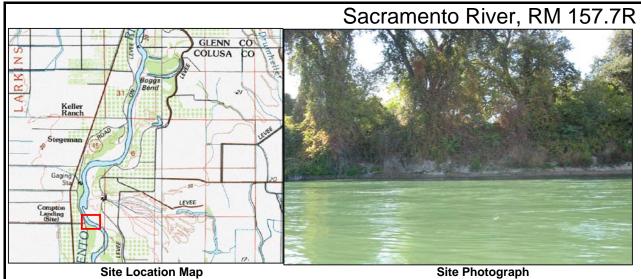


Site Location Map

Site Photograph

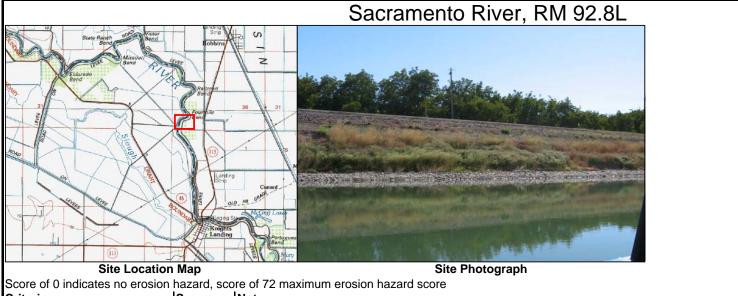
Score of 0 indicates no erosion hazard, score of 72 maximum erosion hazard score		
Criteria	Score	Notes
Bank Slope (*2)	5	Vertical slope
Berm Width (*2) - Estimated	2	15 to 30 ft of berm
Location of erosion	5	Whole Bank
Bank Stability	5	vertical sections and beaver burrows
Site Relative to Bend	3	Outside of a bend, greater than 90 degrees
Vegetation Cover	2	About 60% cover
Tree Hazard	0	no trees
Soil Type (*2)	2	Clays and Silts
Velocity (*2)	2	2.84 ft/s
Human Usage	1	Occassional usage
Erosion Hazard	38	Calculate Erosion Hazard



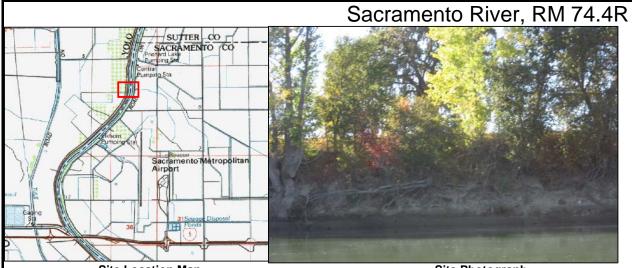


Score of 0 indicates no erosion hazard, score of 72 maximum erosion hazard score

Criteria	Score	Notes
Bank Slope (*2)	4	less than 1:1 slope, near vertical
Berm Width (*2) - Estimated	0	50 ft
Location of erosion	4	full bank and toe
Bank Stability	5	vertical sections and some animal holes
Site Relative to Bend	3	outside of a gentle bend
Vegetation Cover	1	70 to 80%
Tree Hazard	4	large trees with exposed roots
Soil Type (*2)	2	clays and silts
Velocity (*2)	4	5.69 ft/s
Human Usage	0	rare
Erosion Hazard	37	Calculate Erosion Hazard



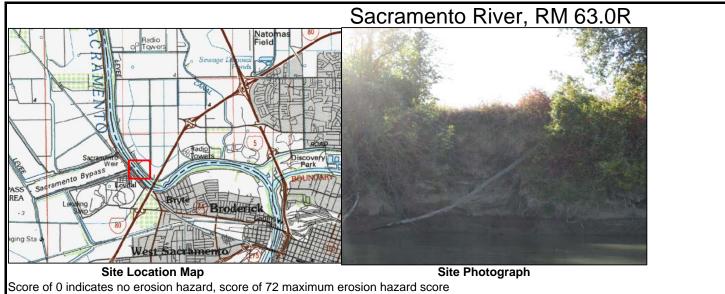
Score Notes Criteria Bank Slope (\*2) 2 2:1 slope Berm Width (\*2) - Estimated 0 to 15 ft 5 Location of erosion 3 toe **Bank Stability** 0 short vertical sections Site Relative to Bend 2 just downstream of a bend 60% Vegetation Cover 1 0 Tree Hazard no trees Soil Type (\*2) 4 sands and silts Velocity (\*2) 3.32 ft/s 3 Human Usage 3 monthly **Erosion Hazard** 37 Calculate Erosion Hazard



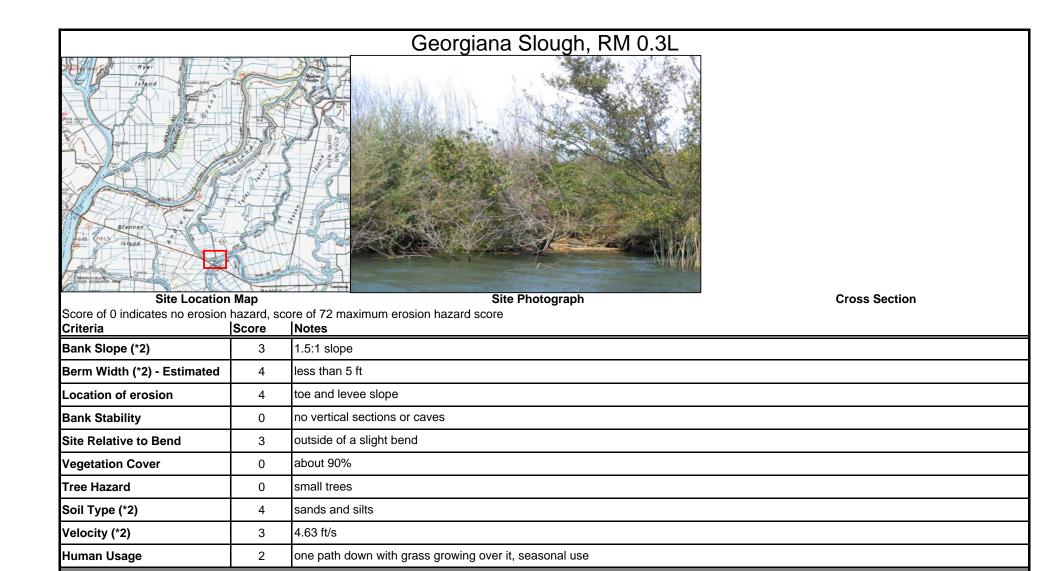
Site Location Map Site Photograph Cross Section

Criteria	Score	notes
Bank Slope (*2)	3	1.5:1 or less
Berm Width (*2) - Estimated	1	25 to 50 ft
Location of erosion	4	toe and bank
Bank Stability	3	caves greater than 4 ft
Site Relative to Bend	0	inside of a bend
Vegetation Cover	4	less than 20%
Tree Hazard	5	trees with exposed roots and leaning
Soil Type (*2)	2	clays and silts
Velocity (*2)	4	5.74 ft/s
Human Usage	1	occassional

Erosion Hazard 37 Calculate Erosion Hazard



Criteria	Score	tes	
Bank Slope (*2)	3	1.5:1 slope	
Berm Width (*2) - Estimated	2	less than 20 ft	
Location of erosion	3	toe	
Bank Stability	2	vertical sections, less than half bank height	
Site Relative to Bend	1	traight	
Vegetation Cover	3	30%	
Tree Hazard	5	arge trees, exposed roots, some leaning	
Soil Type (*2)	2	elays and silts	
Velocity (*2)	2	2.87 ft/s	
Human Usage	5	stairs down to bank, daily	
Erosion Hazard	37	Calculate Erosion Hazard	



37

**Erosion Hazard** 

Calculate Erosion Hazard



**Erosion Hazard** 

## Sacramento River, RM 103.4L



Site Location Map

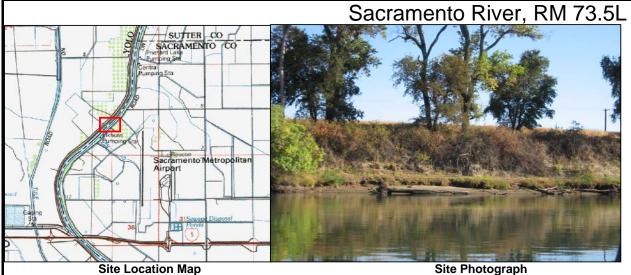
36

Site Photograph

**Cross Section** 

Criteria	Score	core of 72 maximum erosion hazard score   Notes
Bank Slope (*2)	4	1:1 to 1.5:1 slopes
Berm Width (*2) - Estimated	1	25 ft
Location of erosion	4	full bnak and toe
Bank Stability	2	vertical sections, full bank height
Site Relative to Bend	0	inside of a bend
Vegetation Cover	3	25%
Tree Hazard	0	no trees
Soil Type (*2)	4	sands and silts
Velocity (*2)	4	3.52 ft/s, plus eddy
Human Usage	1	occassional

Calculate Erosion Hazard

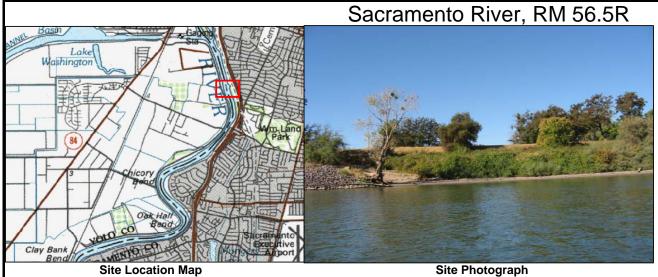


Site Location Map
Site Photograph
Score of 0 indicates no erosion hazard, score of 72 maximum erosion hazard score

Notes Criteria Score Bank Slope (\*2) 1:1 slope 30 to 50 ft Berm Width (\*2) - Estimated 0 Location of erosion 2 full bank vertical sections, greater than half bnak height and caves Bank Stability 5 straight Site Relative to Bend 1 30% Vegetation Cover 3 3 large trees Tree Hazard Soil Type (\*2) 2 clays and silts Velocity (\*2) 3 4.74 ft/s Human Usage 4 weekly

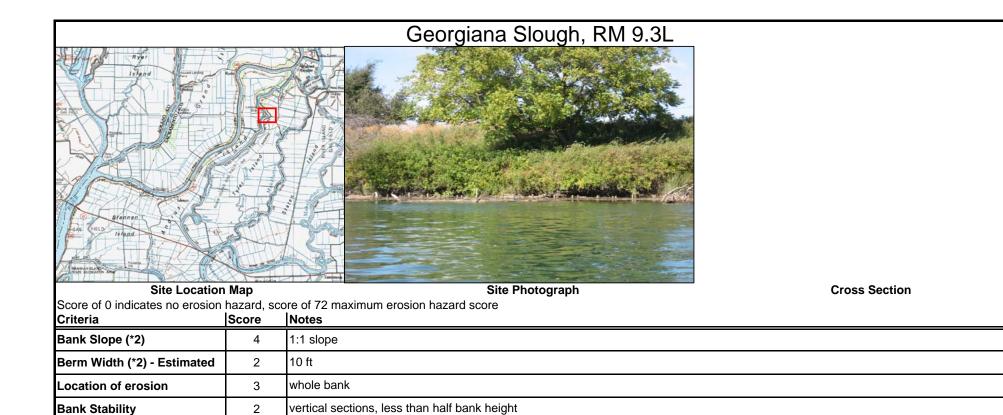
**Cross Section** 

Erosion Hazard 36 Calculate Erosion Hazard



Score of 0 indicates no erosion hazard, score of 72 maximum erosion hazard score

Notes Criteria Score Bank Slope (\*2) 1.5:1 slope 25 ft Berm Width (\*2) - Estimated 1 Location of erosion 2 berm Bank Stability 5 caves and vertical sections Site Relative to Bend straight 1 80% Vegetation Cover 0 4 large trees with exposed roots Tree Hazard Soil Type (\*2) 2 clays and silts 5.11 ft/s Velocity (\*2) 4 Human Usage weekly, rope swing 4 **Erosion Hazard** 36 Calculate Erosion Hazard



outside of a sharp bend

thick vegetation, seasonal

Calculate Erosion Hazard

5

0

4

1

2

36

85%

1.07 ft/s

medium trees

silts and sands

Site Relative to Bend

Vegetation Cover

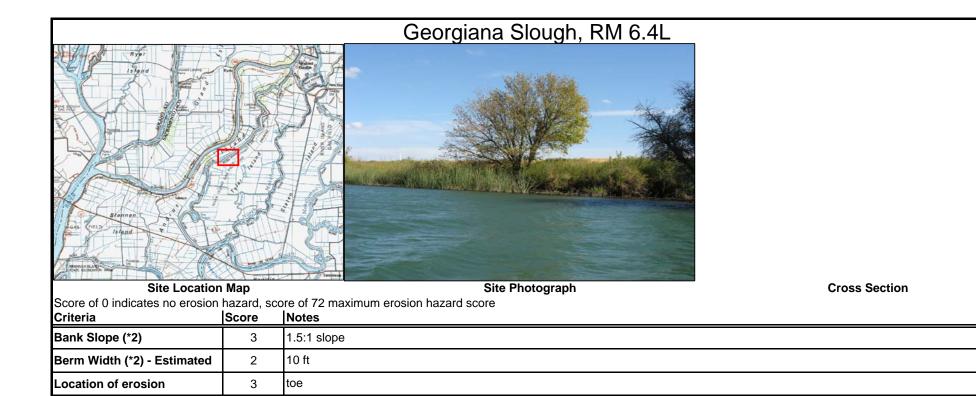
Tree Hazard

Soil Type (\*2)

Velocity (\*2)

Human Usage

**Erosion Hazard** 



caves, small

sands and silts

large trees and exposed roots

Calculate Erosion Hazard

straight

3.78 ft/s

seasonal

70%

1

1

1

4

3

2

36

Bank Stability

Tree Hazard Soil Type (\*2)

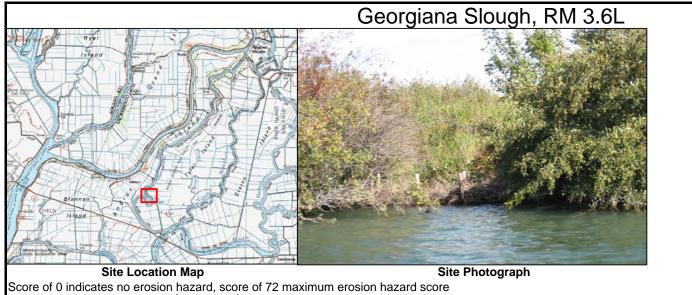
Velocity (\*2)

Human Usage

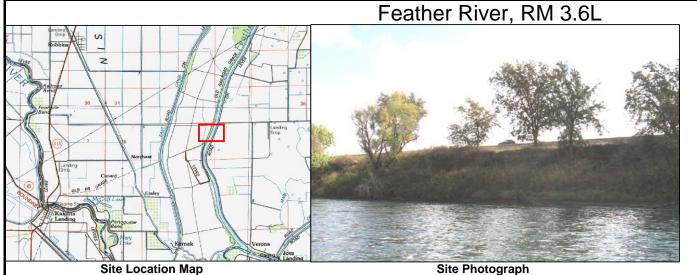
**Erosion Hazard** 

Site Relative to Bend

Vegetation Cover



Criteria	Score	Notes	
Bank Slope (*2)	2	2:1 slope	
Berm Width (*2) - Estimated	4	less than 5 ft of berm	
Length of erosion	4	1165 ft	
Bank Stability	3	beaver burrow at toe, greater than 4 ft	
Site Relative to Bend	0	nside of a bend	
Vegetation Cover	0	10% cover	
Tree Hazard	2	nedium trees	
Soil Type (*2)	4	ands and silts	
Velocity (*2)	3	64 ft/s	
Human Usage	1	occassional	
Erosion Hazard	36	Calculate Erosion Hazard	



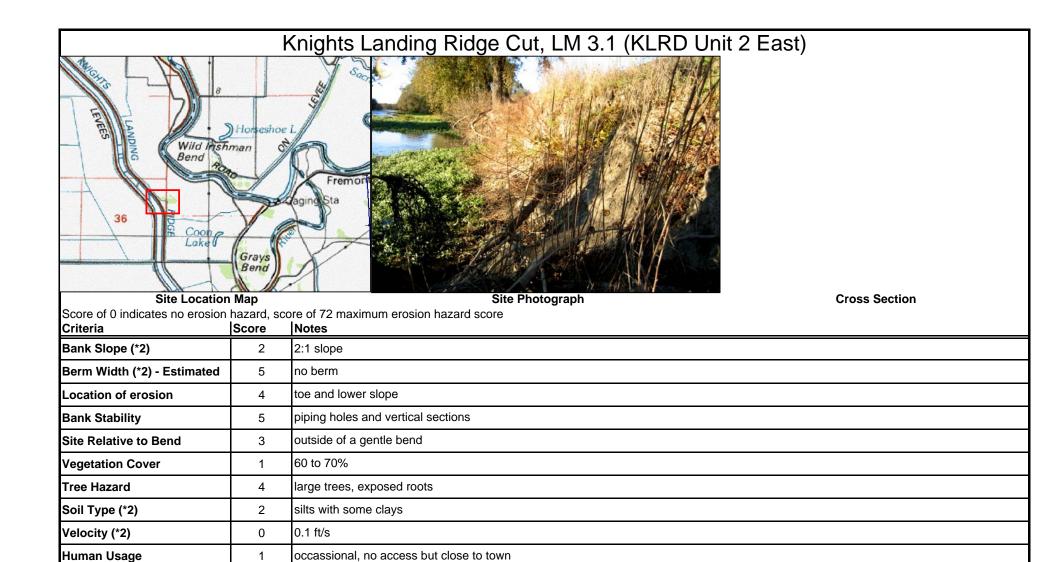
Calculate Erosion Hazard

Score of 0 indicates no erosion hazard, score of 72 maximum erosion hazard score

36

**Erosion Hazard** 

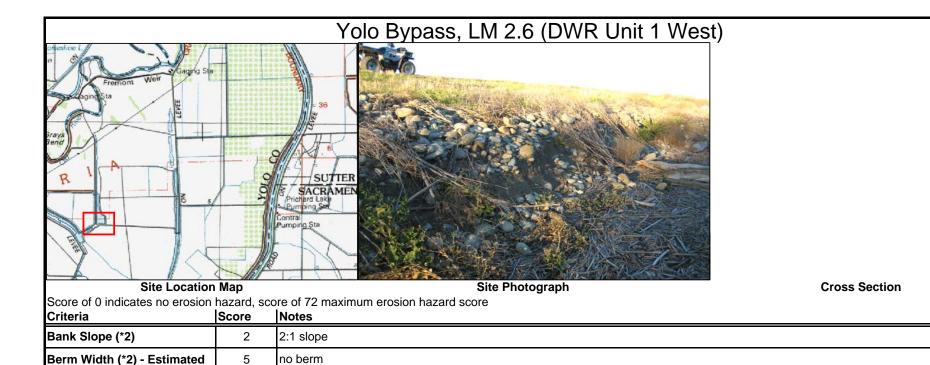
Criteria Score Notes Bank Slope (\*2) 1.5:1 slope 30 ft Berm Width (\*2) - Estimated 0 Location of erosion 2 whole bank holes left from fallen trees, and erosion pockets Bank Stability 3 Site Relative to Bend straight 1 80 to 90% Vegetation Cover 0 large trees with visible roots Tree Hazard 4 Soil Type (\*2) 4 sands and silts Velocity (\*2) 4 7.23 ft/s Path down, a bare spot that appears to be used by humans Human Usage 4



36

**Erosion Hazard** 

Calculate Erosion Hazard



toe and lower slope

straight

no trees

1.5 ft/s

medium cover

sands and silts

occassional

vertical sections, about half bank height

Calculate Erosion Hazard

4

4

1

2

4

1

36

Location of erosion

Site Relative to Bend

Vegetation Cover

Bank Stability

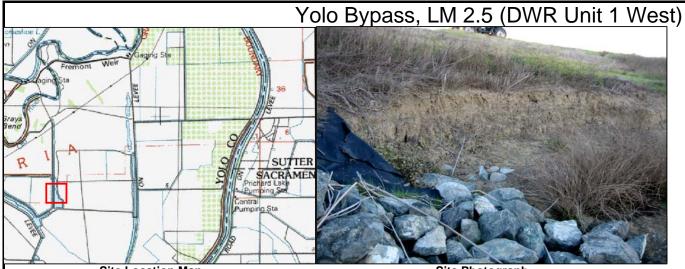
Tree Hazard

Soil Type (\*2)

Velocity (\*2)

Human Usage

**Erosion Hazard** 



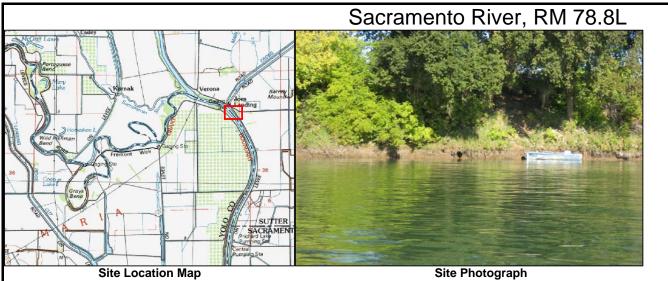
Site Location Map
Site Photograph
Cross Section
Score of 0 indicates no erosion hazard, score of 72 maximum erosion hazard score
Criteria
IScore | Notes

Criteria	Score	Notes	
Bank Slope (*2)	2	2:1 slope	
Berm Width (*2) - Estimated	5	no berm	
Location of erosion	4	toe and lower slope	
Bank Stability	4	vertical sections about half bank height	
Site Relative to Bend	1	straight	
Vegetation Cover	2	50%	
Tree Hazard	0	no trees	
Soil Type (*2)	4	ands and silts	
Velocity (*2)	1	1.5 ft/s	
Human Usage	1	occassional	
Erosion Hazard	36	Calculate Erosion Hazard	



Score of 0 indicates no erosion hazard, score of 112 maximum erosion hazard score

Notes Criteria Score Bank Slope (\*2) 1:1 slope Berm Width (\*2) - Estimated 30 ft 0 Location of erosion 4 full bank and toe Bank Stability 5 vertical sections and caves Site Relative to Bend relatively straight 1 30 - 40% Vegetation Cover 3 0 Tree Hazard no trees Soil Type (\*2) 4 sands and silts Velocity (\*2) 3.23 ft/s 3 Human Usage 0 rare, too steep **Erosion Hazard** 35 Calculate Erosion Hazard



Site Location Map
Site Photograph
Score of 0 indicates no erosion hazard, score of 72 maximum erosion hazard score

Criteria	Score	Notes	
Bank Slope (*2)	3	1.5:1 slope	
Berm Width (*2) - Estimated	0	35 ft	
Location of erosion	3	toe	
Bank Stability	5	vertical sections less than half bank height and caves	
Site Relative to Bend	3	outside of a gentle bend	
Vegetation Cover	1	60 - 70%	
Tree Hazard	3	arge trees	
Soil Type (*2)	4	ands and silts	
Velocity (*2)	3	.82 ft/s	
Human Usage	0	are	
Erosion Hazard	35	Calculate Erosion Hazard	



Site Location Map
Score of 0 indicates no erosion hazard, score of 72 maximum erosion hazard score

Notes Criteria Score 1.5:1 Bank Slope (\*2) 125 ft Berm Width (\*2) - Estimated 0 Location of erosion 4 levee slope and toe Bank Stability 2 small vertical sections Site Relative to Bend straight 1 40% Vegetation Cover 3 3 large trees, one recently fallen Tree Hazard Soil Type (\*2) 4 sands and silts 5.11 ft/s Velocity (\*2) 4 Human Usage gate on top, rare 0 **Erosion Hazard** 35 Calculate Erosion Hazard



Site Location Map
Score of 0 indicates no erosion hazard, score of 72 maximum erosion hazard score

Site Photograph
Cross Section

Criteria	Score	Notes
Bank Slope (*2)	4	1:1 slope
Berm Width (*2) - Estimated	2	10 ft
Location of erosion	2	berm slope

Bank Stability 2 vertical sections, less than half bank height
Site Relative to Bend 1 straight

Vegetation Cover 1 80%

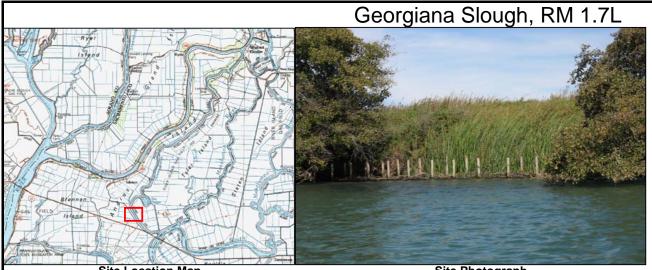
Tree Hazard 4 large trees with exposed roots

 Soil Type (\*2)
 2
 clays and silts

 Velocity (\*2)
 3
 4.54 ft/s

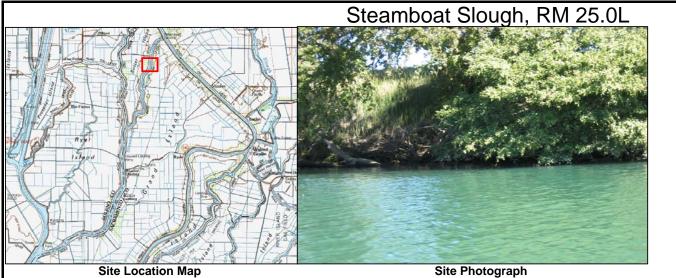
Human Usage 3 monthly, some debris

Erosion Hazard 35 Calculate Erosion Hazard



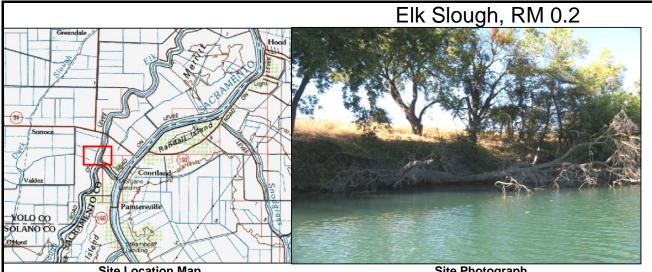
Site Location Map
Site Photograph
Score of 0 indicates no erosion hazard, score of 72 maximum erosion hazard score
Criteria | Score | Notes

Criteria	Score	Notes	
Bank Slope (*2)	2	2:1 slope	
Berm Width (*2) - Estimated	4	less than 5 ft	
Location of erosion	3	toe	
Bank Stability	3	beaver burrows, greater than 4 ft	
Site Relative to Bend	1	traight	
Vegetation Cover	0	95%	
Tree Hazard	2	nedium trees	
Soil Type (*2)	4	ands and silts	
Velocity (*2)	3	.05 ft/s	
Human Usage	0	Vegetation too dense for human access	
Erosion Hazard	35	Calculate Erosion Hazard	



Site Location Map
Site Photograph
Score of 0 indicates no erosion hazard, score of 72 maximum erosion hazard score

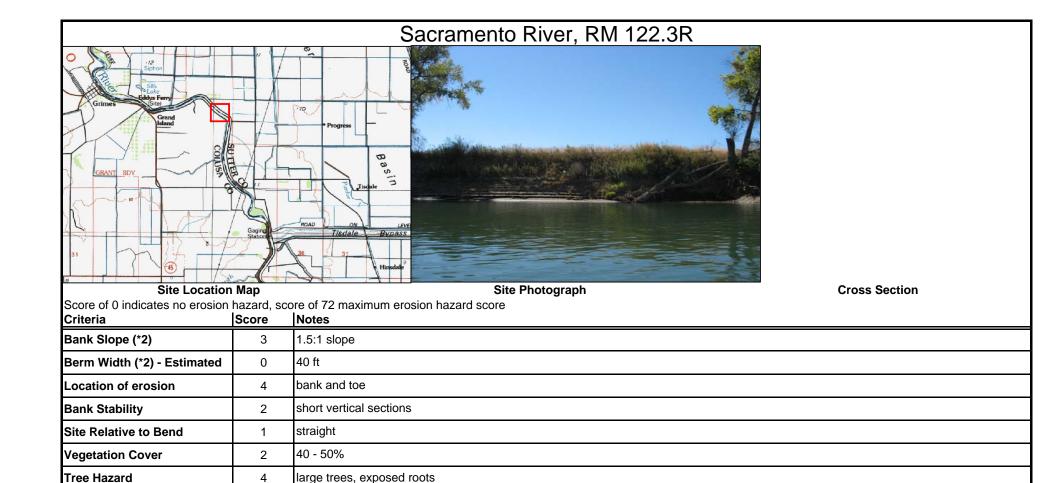
Criteria		Notes	
Bank Slope (*2)	3	1.5:1 slope	
Berm Width (*2) - Estimated	3	5 ft	
Location of erosion	2	lower bank	
Bank Stability	1	caves from tree popouts	
Site Relative to Bend	1	traight	
Vegetation Cover	2	0%	
Tree Hazard	5	arge trees, exposed roots and leaning	
Soil Type (*2)	2	ays and silts	
Velocity (*2)	3	48 ft/s	
Human Usage	2	easonal	
Erosion Hazard	35	Calculate Erosion Hazard	



Site Location Map Site Photograph Cross Section

Score of 0 inc	dicates no erosion	hazard, so	core of 72	? maximum	erosion l	nazard	score
		I _	1				

Criteria	Score	Notes	
Bank Slope (*2)	4	1:1 slope	
Berm Width (*2) - Estimated	5	no berm	
Location of erosion	1	levee slope	
Bank Stability	2	vertical sections, less than half bank height	
Site Relative to Bend	1	raight	
Vegetation Cover	0	lense, 80 to 90%	
Tree Hazard	4	arge trees with exposed roots	
Soil Type (*2)	1	lays	
Velocity (*2)	2	ft/s	
Human Usage	3	near highway, monthly	
Erosion Hazard	35	Calculate Erosion Hazard	



Soil Type (\*2)

Velocity (\*2)

Human Usage

**Erosion Hazard** 

2

4

3

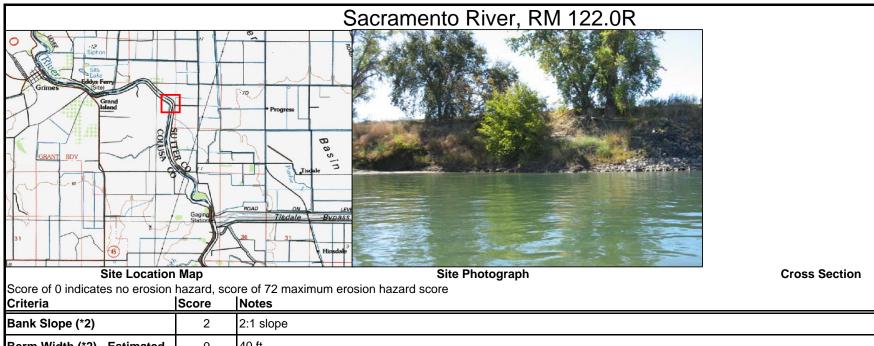
34

clays and silts

Calculate Erosion Hazard

5.48 ft/s

monthly



40 ft Berm Width (\*2) - Estimated 0 Location of erosion 4 lower bank and toe vertical sections greater than half bank height Bank Stability 4 inside of a bend Site Relative to Bend 0 40% Vegetation Cover 2 large trees, exposed roots and leaning 5 Tree Hazard Soil Type (\*2) 2 clays and silts Velocity (\*2) 4 5.01 ft/s Human Usage 3 monthly

Erosion Hazard 34 Calculate Erosion Hazard

## Carried State Common Liverglands

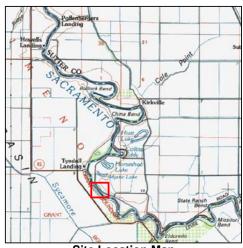
## Sacramento River, RM 116.0L



Site Location Map

Site Photograph

Score of 0 indicates no erosion Criteria	n hazard, s  Score	core of 112 maximum erosion hazard score  Notes	0.000 000
Bank Slope (*2)	4	1.5: slope	
Berm Width (*2) - Estimated	0	30 ft	
Location of erosion	4	toe and berm	
Bank Stability	2	vertical sections, less than half bank height	
Site Relative to Bend	1	straight	
Vegetation Cover	2	60%	
Tree Hazard	0	no trees	
Soil Type (*2)	4	sands and silts	
Velocity (*2)	3	4.35 ft/s	
Human Usage	3	monthly	
Frosion Hazard	34	Calculate Frosion Hazard	



## Sacramento River, RM 101.3R



Site Location Map

2

3

34

clays and silts

occassional

3.22 ft/s

Site Photograph

**Cross Section** 

One Legation map		One i notograph	01000 00011011
Score of 0 indicates no erosion hazard, score of		ore of 72 maximum erosion hazard score	
Criteria Score Notes		Notes	
Bank Slope (*2)	4	1:1 slope	
Berm Width (*2) - Estimated	2	greater than 10 ft	
Location of erosion	3	toe	
Bank Stability	5	caves less than 4 ft and some vertical sections	
Site Relative to Bend	1	straight	
Vegetation Cover	2	50%	
Tree Hazard	0	small trees	

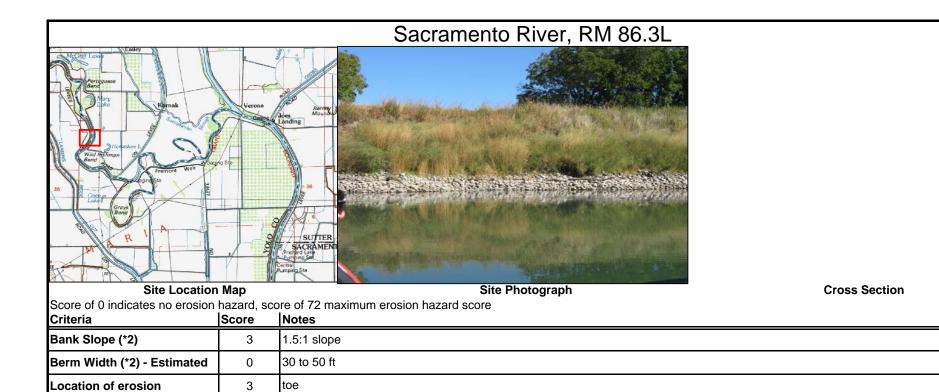
Erosion Hazard

Soil Type (\*2)

Velocity (\*2)

Human Usage

Calculate Erosion Hazard



vertical sections less than half bank height and caves

Calculate Erosion Hazard

outside of a gentle bend

about 50%

3.35 ft/s

occassional

no trees on bank

sands and silts

**Bank Stability** 

Tree Hazard

Soil Type (\*2)

Velocity (\*2)

Human Usage

**Erosion Hazard** 

Site Relative to Bend

Vegetation Cover

5

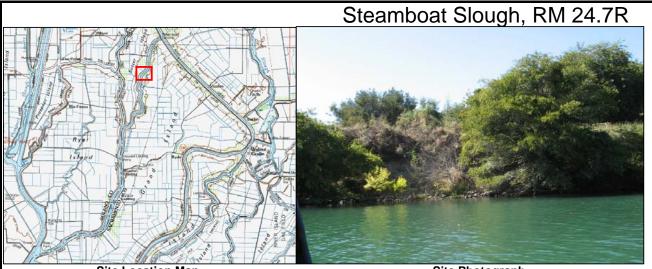
3

2

4

3

34



Site Location Map Site Photograph **Cross Section** Score of 0 indicates no erosion hazard, score of 72 maximum erosion hazard score

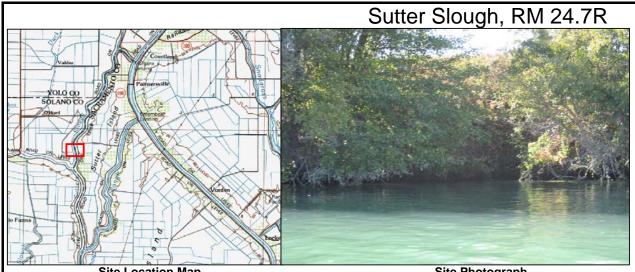
Criteria	Score	Notes	
Bank Slope (*2)	4	1:1 slope	
Berm Width (*2) - Estimated	3	5 ft	
Location of erosion	2	full bank	
Bank Stability	2	some vertical sections	
Site Relative to Bend	0	inside of a bend	
Vegetation Cover	1	75%	
Tree Hazard	4	trees with exposed roots	
Soil Type (*2)	2	clays and silts	
Velocity (*2)	3	4.67 ft/s	
Human Usage	1	occassional	
Erosion Hazard	34	Calculate Erosion Hazard	



Site Location Map
Score of 0 indicates no erosion hazard, score of 72 maximum erosion hazard score

Score of 0 indicates no erosion hazard, score of 72 maximum erosion hazard score

Criteria	Score	Notes		
Bank Slope (*2)	4	1:1 slope		
Berm Width (*2) - Estimated	5	no berm		
Location of erosion	1	levee slope		
Bank Stability	0	no vertical sections or caves		
Site Relative to Bend	1	straight		
Vegetation Cover	0	90%		
Tree Hazard	1	young trees		
Soil Type (*2)	2	clays and silts		
Velocity (*2)	3	3.72 ft/s		
Human Usage	3	monthly		
Erosion Hazard	34	Calculate Erosion Hazard		



Site Location Map
Score of 0 indicates no erosion hazard, score of 72 maximum erosion hazard score

Cross Section

Criteria	Score	Notes	
Bank Slope (*2)	2	2:1 slope	
Berm Width (*2) - Estimated	3	5 ft	
Location of erosion	2	lower bank	
Bank Stability	2	vertical sections, half bank height	
Site Relative to Bend	3	outside of a gentle bend	
Vegetation Cover	0	80%	
Tree Hazard	4	small to medium trees, exposed roots	
Soil Type (*2)	2	clays and silts	
Velocity (*2)	3	4.73 ft/s	
Human Usage	3	monthly	
Erosion Hazard	34	Calculate Erosion Hazard	



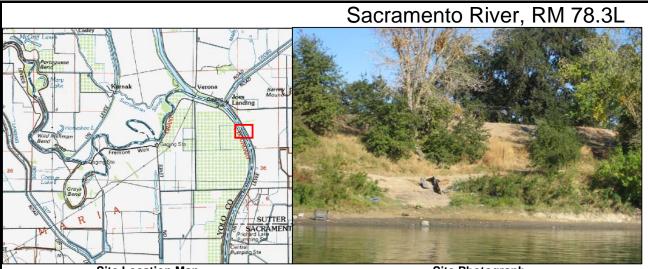
**Erosion Hazard** 

34

Site Location Map
Score of 0 indicates no erosion hazard, score of 72 maximum erosion hazard score

Calculate Erosion Hazard

Score Notes Criteria Bank Slope (\*2) 1.5:1 slope Berm Width (\*2) - Estimated greater than 30 ft 0 Location of erosion berm 1 no vertical sections or burrows **Bank Stability** 0 Site Relative to Bend straight 1 60 to 70% cover Vegetation Cover 1 trees with visible roots Tree Hazard 4 Soil Type (\*2) 4 sands and silts Velocity (\*2) 5 8.79 ft/s Human Usage 3 monthly



Site Location Map
Score of 0 indicates no erosion hazard, score of 72 maximum erosion hazard score

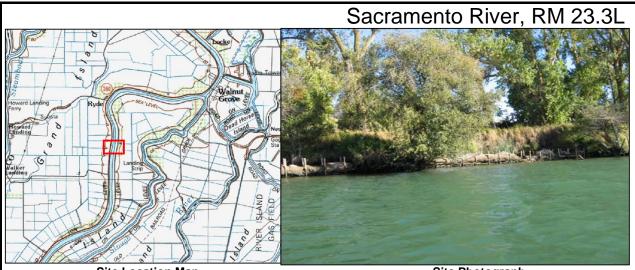
Site Photograph
Cross Section

Criteria	Score	Notes	
Bank Slope (*2)	1	2.5:1 slope	
Berm Width (*2) - Estimated	2	15 ft	
Location of erosion	3	toe	
Bank Stability	0	no vertical sections or caves	
Site Relative to Bend	1	straight	
Vegetation Cover	1	80%	
Tree Hazard	3	large trees	
Soil Type (*2)	4	sands and silts	
Velocity (*2)	3	4.89 ft/s	
Human Usage	5	daily, road and lots of human debris	
Erosion Hazard	33	3 Calculate Erosion Hazard	



Site Location Map Site Photograph Cross Section
Score of 0 indicates no erosion hazard, score of 72 maximum erosion hazard score

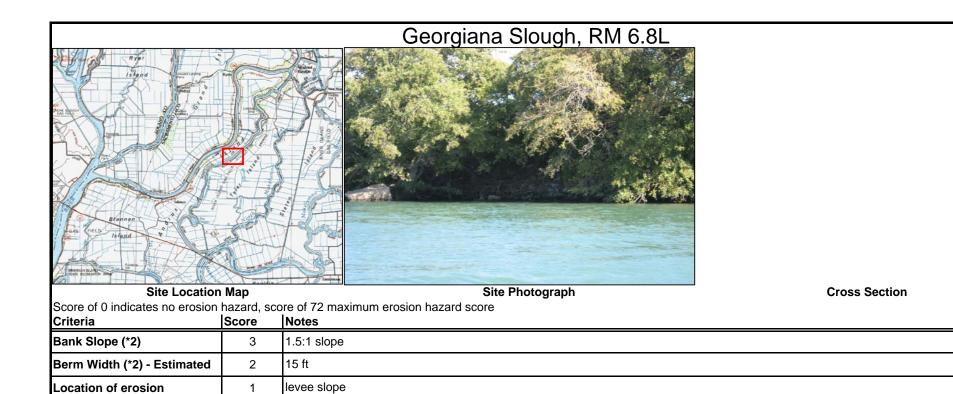
	Score	lotes		
Bank Slope (*2)	3	5:1 slope		
Berm Width (*2) - Estimated	2	less than 20 ft		
Location of erosion	3	toe		
Bank Stability	2	vertical sections, less than halfbank height		
Site Relative to Bend	1	straight		
Vegetation Cover	1	80%		
Tree Hazard	4	large trees with exposed roots		
Soil Type (*2)	2	clays and silts		
Velocity (*2)	3	3.08 ft/s		
Human Usage	2	heavy veg, seasonal		
Erosion Hazard	33	Calculate Erosion Hazard		



Site Photograph **Cross Section** Site Location Map

Score of	f 0 indicates no	o erosion hazard	d, score of 72	? maximum erosid	on hazard score
		I _	1		

Criteria	Score	Notes
Bank Slope (*2)	3	2:1 slope
Berm Width (*2) - Estimated	0	30 to 50 ft
Location of erosion	4	berm and toe
Bank Stability	2	short vertical sections
Site Relative to Bend	1	straight
Vegetation Cover	0	80 - 90%
Tree Hazard	4	large trees, exposed roots
Soil Type (*2)	4	sands and silts
Velocity (*2)	3	4.16 ft/s
Human Usage	2	seasonal
Erosion Hazard	33	Calculate Erosion Hazard



**Bank Stability** 

Tree Hazard Soil Type (\*2)

Velocity (\*2)

Human Usage

**Erosion Hazard** 

Site Relative to Bend

Vegetation Cover

2

1

3

4

3

2

33

short vertical sections

straight

large trees

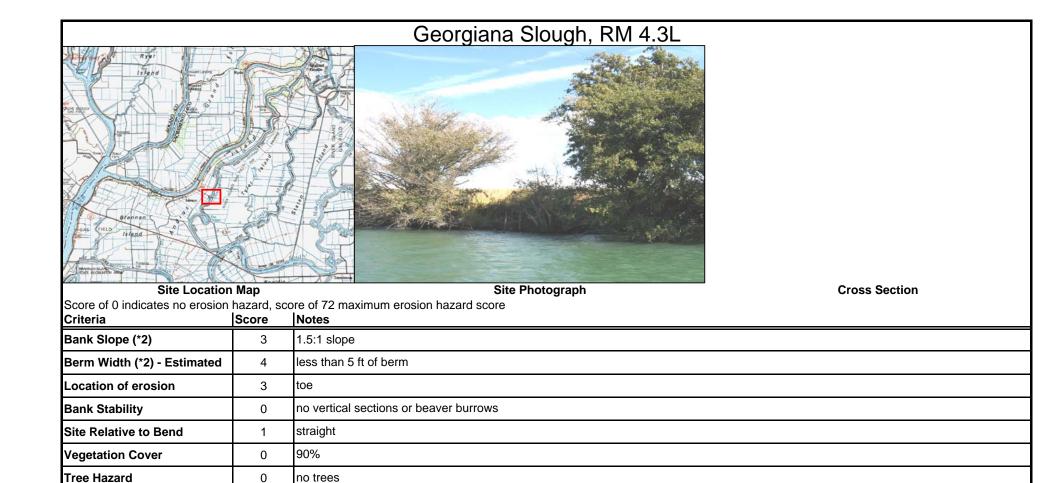
3.77 ft/s

seasonal

sands and silts

Calculate Erosion Hazard

95%



Soil Type (\*2)

Velocity (\*2)

Human Usage

**Erosion Hazard** 

4

3

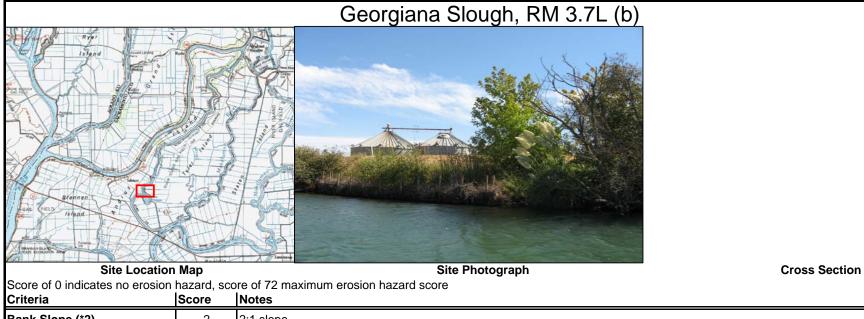
33

sands and silts

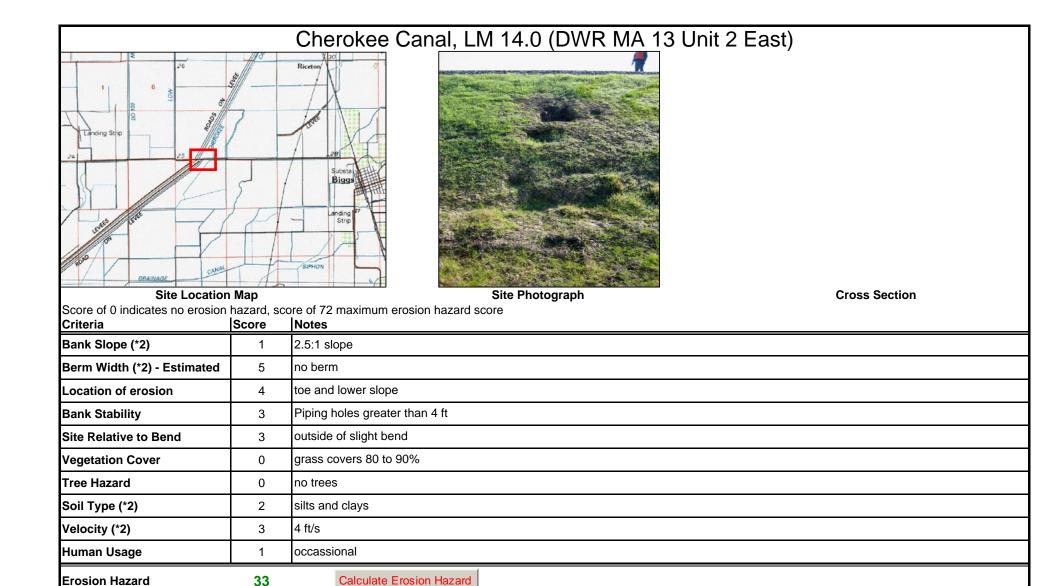
4.02 ft/s

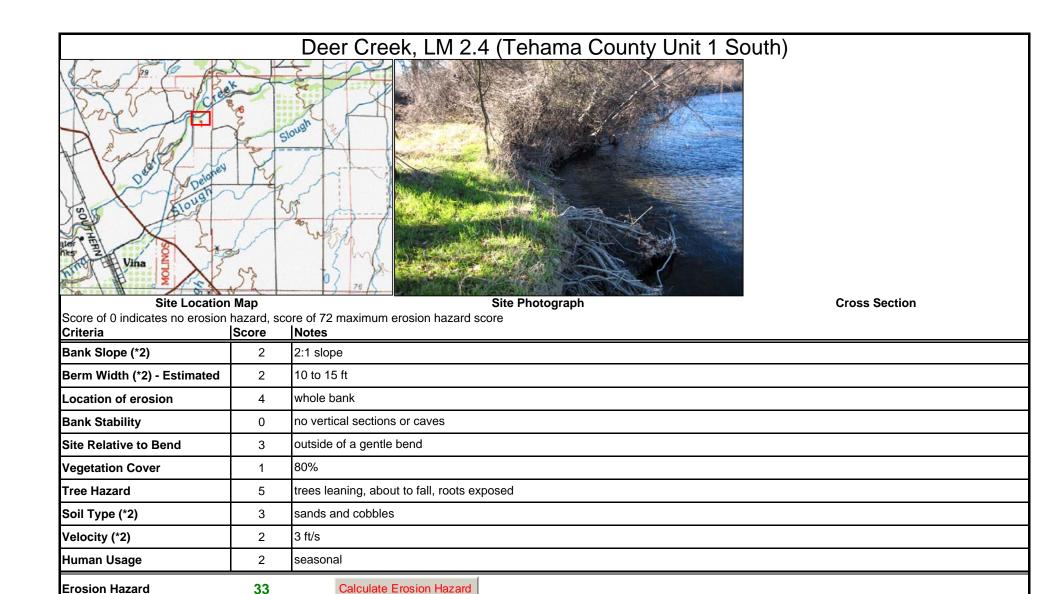
occassional

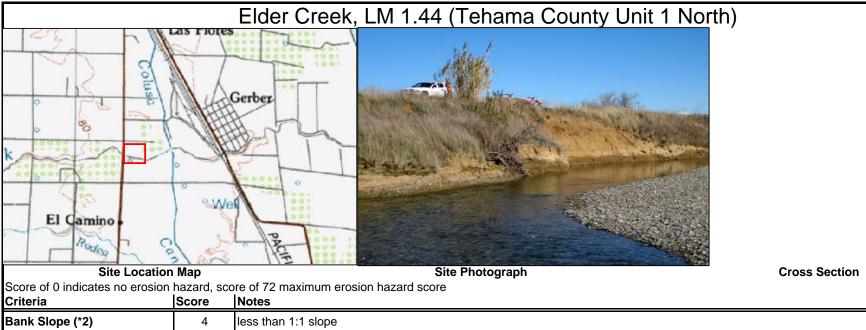
Calculate Erosion Hazard



Bank Slope (\*2) 2:1 slope Berm Width (\*2) - Estimated 4 less than 5 ft Location of erosion 3 toe some erosion pockets **Bank Stability** 1 Site Relative to Bend inside of a bend 0 70% cover Vegetation Cover 1 young trees Tree Hazard 1 Soil Type (\*2) 4 sands and silts Velocity (\*2) 4.04 ft/s 3 Human Usage adjacent to private property, occassional **Erosion Hazard** 33 Calculate Erosion Hazard







25 to 30 ft Berm Width (\*2) - Estimated 1 Location of erosion 5 whole bank and underwater **Bank Stability** 5 vertical sections and animal burrows straight Site Relative to Bend 1 60% Vegetation Cover 2 0 Tree Hazard no trees Soil Type (\*2) 2 clays and silts Velocity (\*2) 2 3 ft/s Human Usage 2 seasonal

Erosion Hazard 33 Calculate Erosion Hazard

# Compton Leving Chief Compton C

### Sacramento River, RM 152.8L



Site Location Map

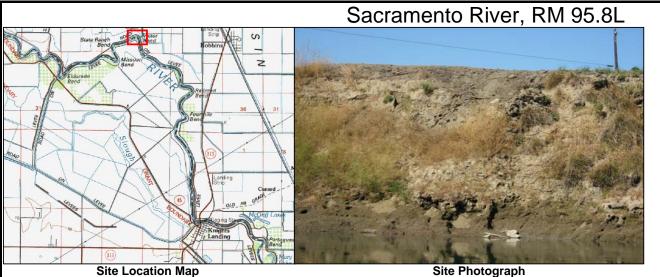
Site Photograph

Score of 0 indicates no erosion <b>Criteria</b>	hazard, so	e of 72 maximum erosion hazard score Notes			
Bank Slope (*2)	3	1.5:1 slope			
Berm Width (*2) - Estimated	0	30 ft			
Location of erosion	2	full bank			
Bank Stability	5	vertical sections and caves			
Site Relative to Bend	1	straight			
Vegetation Cover	1	70%			
Tree Hazard	5	large trees, leaning with exposed roots			
Soil Type (*2)	2	clays and silts			
Velocity (*2)	3	4.64 ft/s			
Human Usage	2	seasonal			
Erosion Hazard	32	Calculate Erosion Hazard			



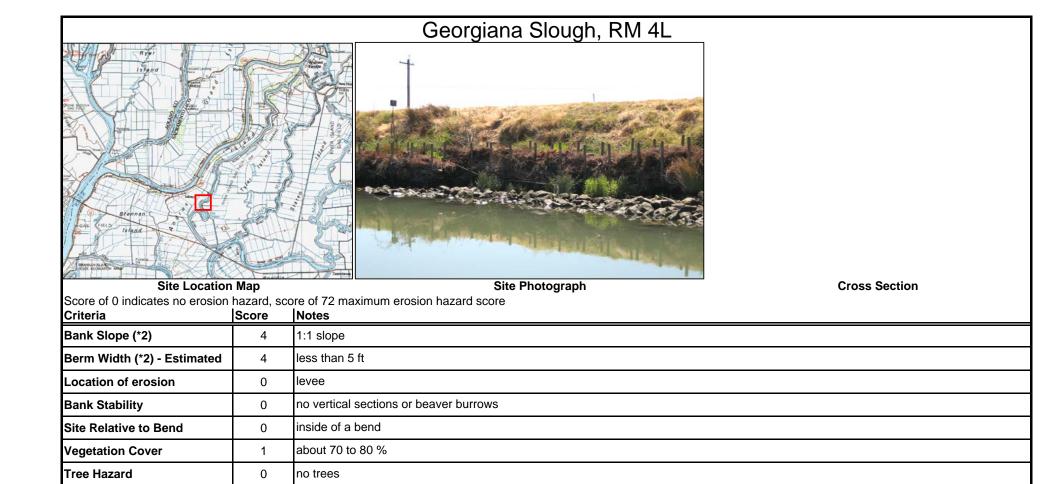
Score of 0 indicates no erosion hazard, score of 72 maximum erosion hazard score

Criteria	Score	Notes			
Bank Slope (*2)	2	2:1 slope			
Berm Width (*2) - Estimated	1	25 ft			
Location of erosion	3	toe			
Bank Stability	1	caves			
Site Relative to Bend	2	just downstream of a bend			
Vegetation Cover	3	40%			
Tree Hazard	3	arge trees			
Soil Type (*2)	2	clays and silts			
Velocity (*2)	4	i.04 ft/s			
Human Usage	2	seasonal			
Erosion Hazard	32	Calculate Erosion Hazard			



Site Location Map
Score of 0 indicates no erosion hazard, score of 72 maximum erosion hazard score
Criteria
IScore
INdes

Criteria	Score	Notes			
Bank Slope (*2)	3	1.5:1 slope			
Berm Width (*2) - Estimated	0	30 ft			
Location of erosion	3	toe			
Bank Stability	1	animal burrows			
Site Relative to Bend	5	outside of a tight bend			
Vegetation Cover	1	70%			
Tree Hazard	0	no trees			
Soil Type (*2)	4	ands and silts			
Velocity (*2)	3	.38 ft/s			
Human Usage	2	seasonal			
Erosion Hazard	32	Calculate Erosion Hazard			



Soil Type (\*2)

Velocity (\*2)

Human Usage

**Erosion Hazard** 

4

3

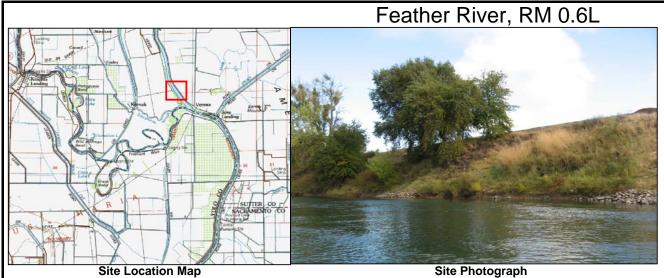
32

sands and silts

3.76 ft/s

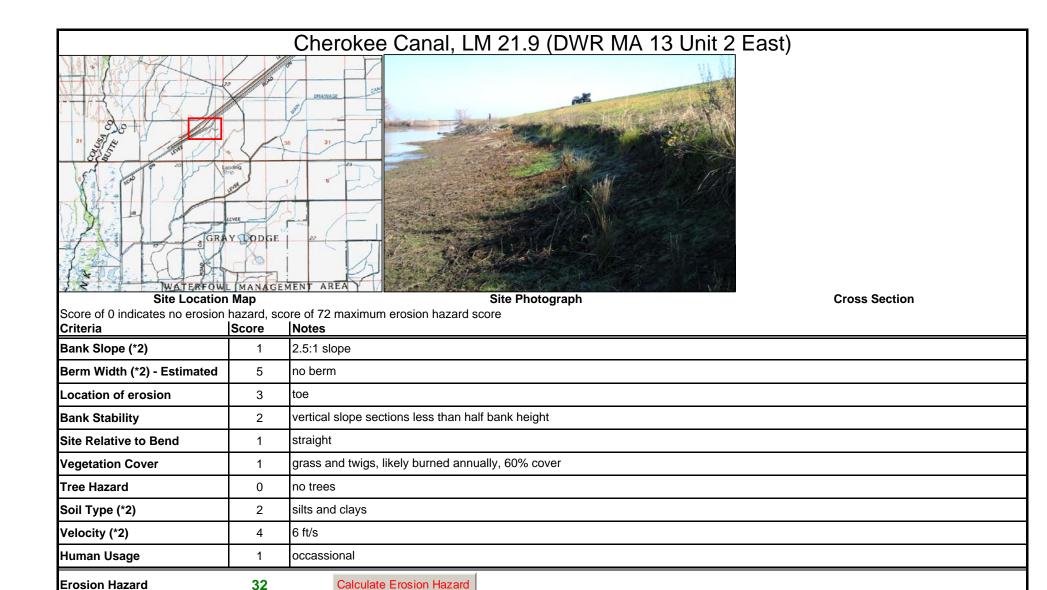
occassional

Calculate Erosion Hazard



Site Location Map
Site Photograph
Cross Section
Score of 0 indicates no erosion hazard, score of 72 maximum erosion hazard score

Criteria	Score	Notes			
Bank Slope (*2)	1	2.5:1 slope			
Berm Width (*2) - Estimated	2	15 ft			
Location of erosion	3	toe			
Bank Stability	0	no vertical sections or caves/burrows			
Site Relative to Bend	1	straight			
Vegetation Cover	1	about 60 to 70%			
Tree Hazard	4	large trees with visible roots			
Soil Type (*2)	3	Sands			
Velocity (*2)	3	.8 ft/s			
Human Usage	5	multiple paths seen down to river, daily usage			
Erosion Hazard	32	Calculate Erosion Hazard			





# Sacramento River, RM 163.0L



**Cross Section** 

Site Photograph

Score of 0 indicates no erosion hazard, score of 72 maximum erosion hazard score

Criteria	Score	Notes			
Bank Slope (*2)	3	1.5:1 slope			
Berm Width (*2) - Estimated	0	60 ft			
Location of erosion	2	full bank			
Bank Stability	2	vertical sections, less than half bank height			
Site Relative to Bend	3	outside of a gentle bend			
Vegetation Cover	0	80%			
Tree Hazard	4	large trees with exposed roots			
Soil Type (*2)	2	clays and silts			
Velocity (*2)	5	10.07 ft/s			
Human Usage	0	rare			
Erosion Hazard	31	Calculate Erosion Hazard			

### Sacramento River, RM 24.8L

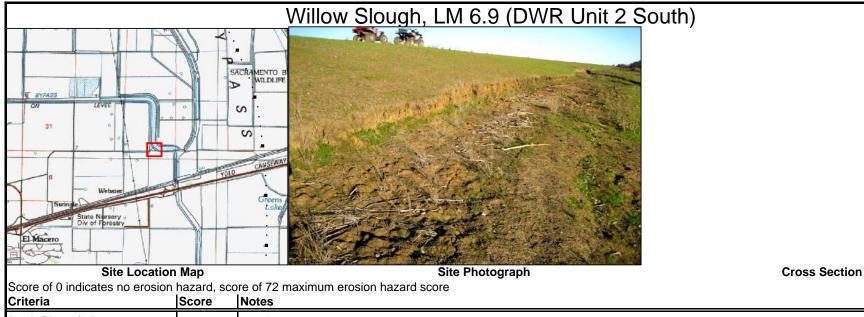




Site Location Map
Score of 0 indicates no erosion hazard, score of 72 maximum erosion hazard score

ograph Cross Section

Criteria	Score	Notes			
Bank Slope (*2)	2	2:1 slope			
Berm Width (*2) - Estimated	2	10 ft			
Location of erosion	2	berm slope			
Bank Stability	0	no vertical sections or caves			
Site Relative to Bend	1	straight			
Vegetation Cover	0	90%			
Tree Hazard	3	large trees			
Soil Type (*2)	4	sands and silts			
Velocity (*2)	3	4.5 ft/s			
Human Usage	3	monthly			
Erosion Hazard	31	Calculate Erosion Hazard			



Criteria	Score	Notes			
Bank Slope (*2)	2	2:1 slope			
Berm Width (*2) - Estimated	5	no berm			
Location of erosion	2	lower levee slope			
Bank Stability	2	vertical sections, less than half bank height			
Site Relative to Bend	4	outside of a 90 degree bend			
Vegetation Cover	3	poorly seeded grass			
Tree Hazard	0	no trees			
Soil Type (*2)	2	clays and silts			
Velocity (*2)	0	.2 ft/s			
Human Usage	2	seasonal for duck hunting			
Fracion Hazard	21	Calculate Erosion Hazard			

Erosion Hazard 31 Calculate Erosion Hazard

# Follenistriers Landing Howells Landing Ridoct Benn Rireville Chart Colors River Lake State Bench Affective Affect Lake Tymodall Landing Affect Lake Tymodall Landing Affect Lake Tymodall Tymodall Affect Lake Tymodall Tymod

# Sacramento River, RM 104.0L



Site Location Map

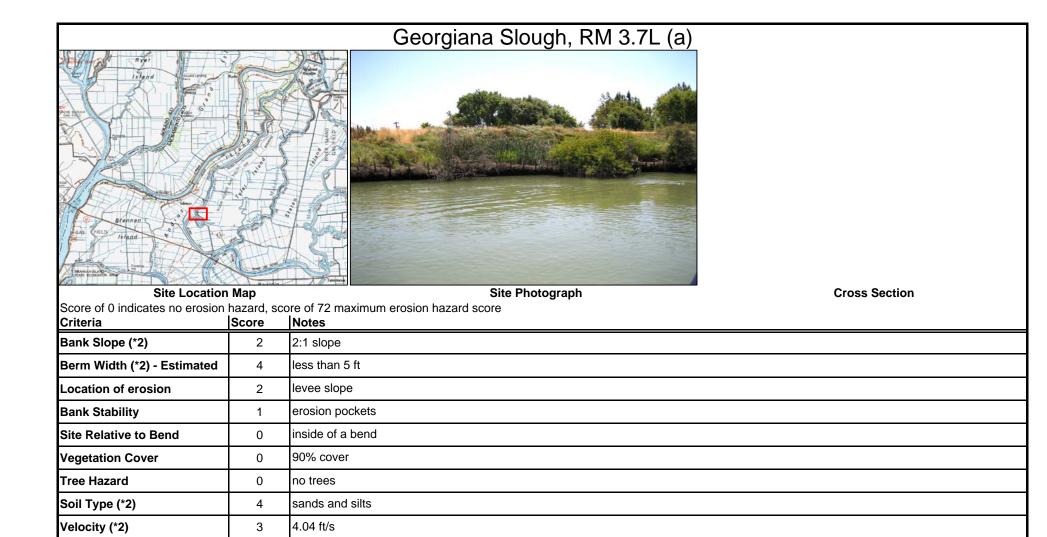
Site Photograph

Score	e of (	) indicat	es no	erosion	hazard	, score o	of 72	maximum	erosion	hazard	score
	_					1					

Criteria	Score	Notes			
Bank Slope (*2)	3	.5:1 slope			
Berm Width (*2) - Estimated	0	35 ft			
Location of erosion	4	levee, and berm			
Bank Stability	2	vertical sections, less than half bank height			
Site Relative to Bend	4	outside of a 90 degree bend			
Vegetation Cover	1	60% to 70%			
Tree Hazard	0	no trees			
Soil Type (*2)	4	ands and silts			
Velocity (*2)	2	.25 ft/s			
Human Usage	1	occassional			
Erosion Hazard	30	Calculate Erosion Hazard			



Criteria	Score	Notes			
Bank Slope (*2)	4	1:1 slope			
Berm Width (*2) - Estimated	2	10 ft			
Location of erosion	1	levee slope			
Bank Stability	0	no vertical sections or caves			
Site Relative to Bend	3	outside of a gentle bend			
Vegetation Cover	1	60%			
Tree Hazard	0	no trees			
Soil Type (*2)	4	sands and silts			
Velocity (*2)	2	2.72 ft/s			
Human Usage	1	occassional			
Erosion Hazard	30	Calculate Erosion Hazard			



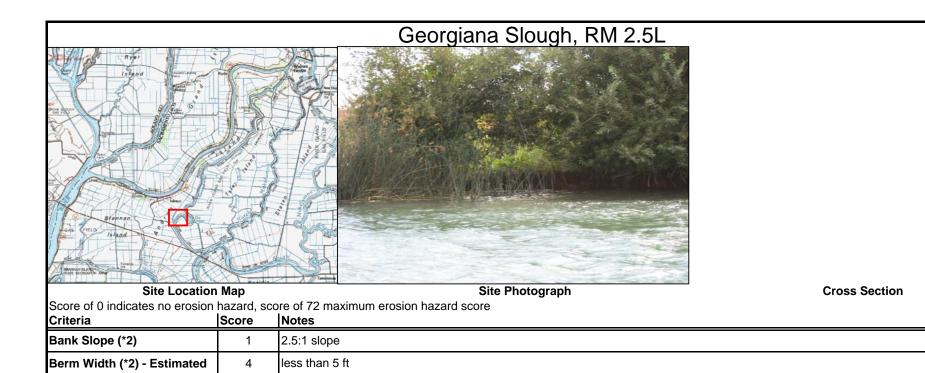
Human Usage

**Erosion Hazard** 

occasional

Calculate Erosion Hazard

30



some vertical sections, less than half the slope height

Calculate Erosion Hazard

Location of erosion

Site Relative to Bend

Vegetation Cover

**Bank Stability** 

Tree Hazard

Soil Type (\*2)

Velocity (\*2)

Human Usage

**Erosion Hazard** 

3

2

0

0

4

3

30

toe

90%

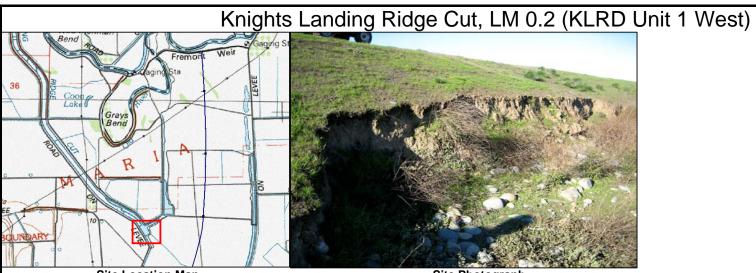
inside of a bend

small trees

occassional

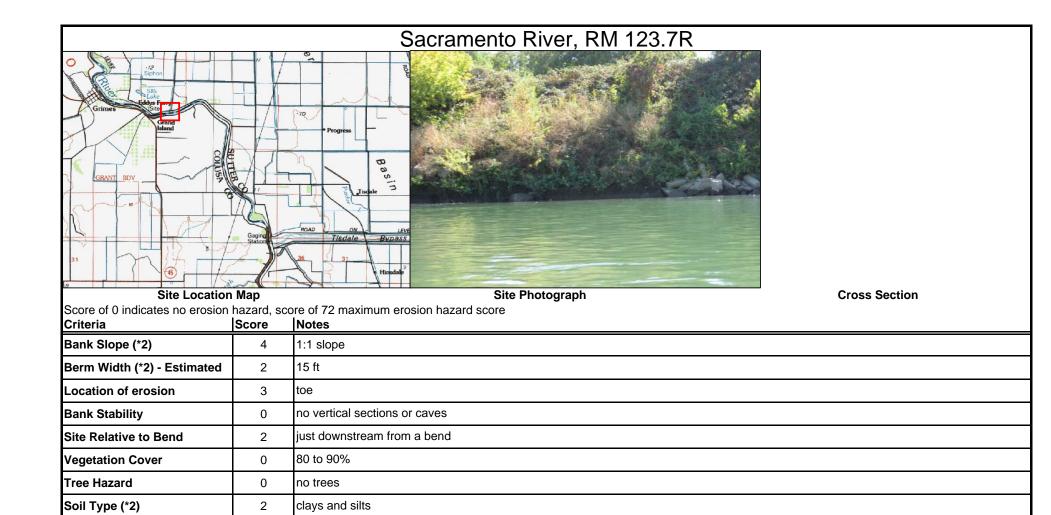
3.99 ft/s

sands and silts



Site Location Map
Site Photograph
Score of 0 indicates no erosion hazard, score of 72 maximum erosion hazard score
Criteria

Criteria	Score	Notes			
Bank Slope (*2)	2	2:1 slope			
Berm Width (*2) - Estimated	5	no berm			
Location of erosion	4	toe and lower slope			
Bank Stability	4	vertical sections, about half bank height			
Site Relative to Bend	1	relatively straight			
Vegetation Cover	3	40% or slightly more, likely burned annualy			
Tree Hazard	0	no trees			
Soil Type (*2)	2	clays and silts			
Velocity (*2)	0	0.1 ft/s			
Human Usage	0	rare, no public access			
Erosion Hazard	30	Calculate Erosion Hazard			



Velocity (\*2)

Human Usage

**Erosion Hazard** 

5.3 ft/s

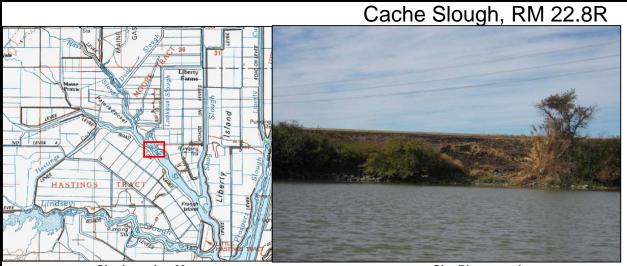
Calculate Erosion Hazard

rare

4

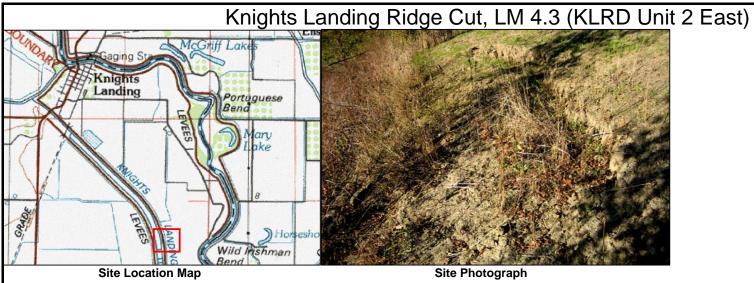
0

29



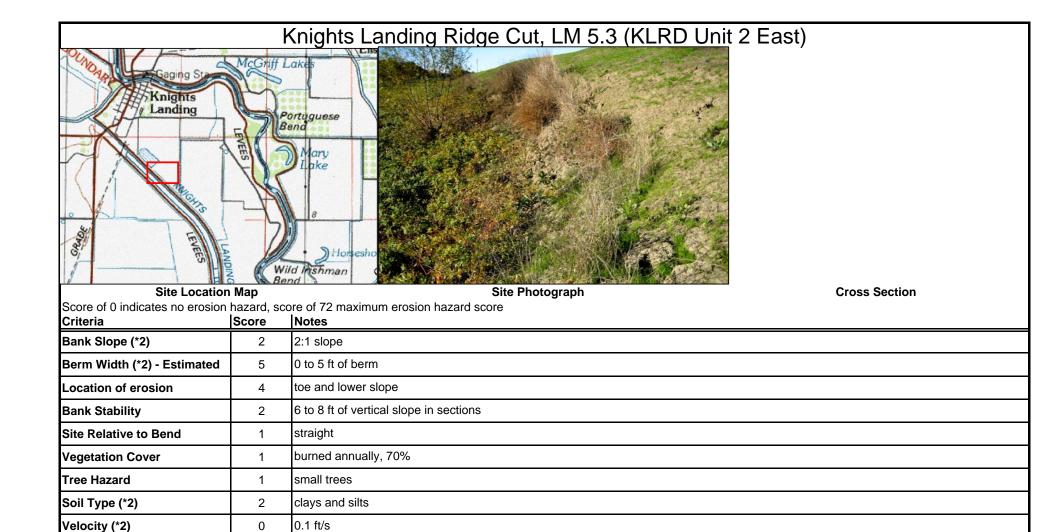
Site Location Map Site Photograph Cross Section

Score of 0 indicates no erosion	core of 0 indicates no erosion hazard, score of 72 maximum erosion hazard score				
Criteria	Score	otes			
Bank Slope (*2)	1	2.5:1 slope			
Berm Width (*2) - Estimated	5	no berm			
Location of erosion	4	mid-lower bank and toe			
Bank Stability	2	vertical sections, less than half bank height			
Site Relative to Bend	1	straight			
Vegetation Cover	2	40%			
Tree Hazard	0	small trees			
Soil Type (*2)	2	clays and silts			
Velocity (*2)	0	ess than a 1ft/s			
Human Usage	4	weekly, human debris and path			
Erosion Hazard	29	Calculate Erosion Hazard			



Score of 0 indicates no erosion hazard, score of 72 maximum erosion hazard score

Criteria	Score	Notes
Bank Slope (*2)	2	2:1 slope
Berm Width (*2) - Estimated	5	no berm
Location of erosion	4	toe and lower slope
Bank Stability	2	vertical sections, less than half bank height
Site Relative to Bend	1	relatively straight
Vegetation Cover	2	50 to 60%
Tree Hazard	1	young trees
Soil Type (*2)	2	silts with some clay
Velocity (*2)	0	0.1 ft/s
Human Usage	1	occassional, no access but close to town
Erosion Hazard	29	Calculate Erosion Hazard



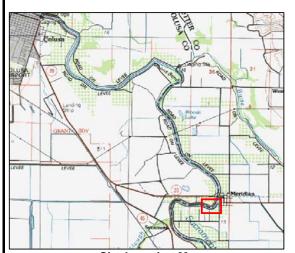
occassional, no access but close to town

Calculate Erosion Hazard

28

Human Usage

**Erosion Hazard** 



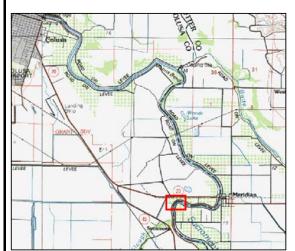
# Sacramento River, RM 133.8L



Site Location Map

Site Photograph

Score of 0 indicates no erosion hazard, score of 72 maximum erosion hazard score		
Criteria	Score	Notes
Bank Slope (*2)	3	1.5:1 slope
Berm Width (*2) - Estimated	1	more than 20 ft of berm
Location of erosion	2	lower bank
Bank Stability	2	vertical sections less than half bank height
Site Relative to Bend	4	outside of a 90 degree bend
Vegetation Cover	1	80%
Tree Hazard	0	no trees
Soil Type (*2)	1	clays and rounded stone
Velocity (*2)	3	4.9 ft/s
Human Usage	2	adjacent to town, seasonal
Erosion Hazard	27	Calculate Erosion Hazard



# Sacramento River, RM 132.9R



Site Location Map

Site Photograph

**Cross Section** 

Score of 0 indicates no erosion hazard, score of 72 maximum erosion hazard score

Criteria | Score | Notes

Criteria	Score	Notes
Bank Slope (*2)	1	2.5:1 slope
Berm Width (*2) - Estimated	0	30 ft
Location of erosion	2	full bank
Bank Stability	2	small vertical sections
Site Relative to Bend	5	outside of a less than 90 degree bend
Vegetation Cover	3	40%
Tree Hazard	1	young trees
Soil Type (*2)	2	clays and silts
Velocity (*2)	3	4.97 ft/s
Human Usage	2	seasonal
Erosion Hazard	27	Calculate Erosion Hazard



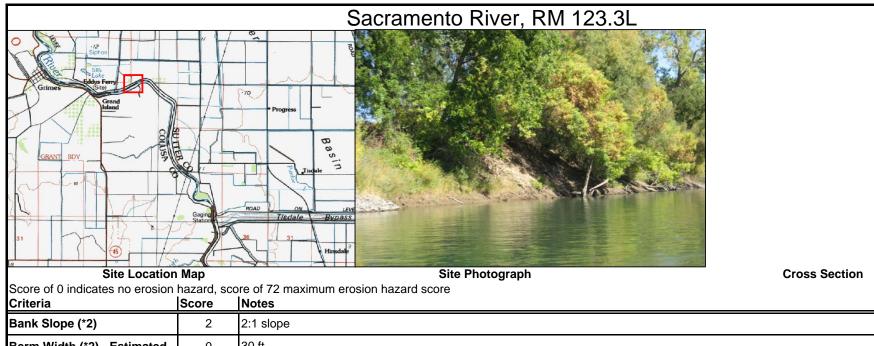
Calculate Erosion Hazard

Score of 0 indicates no erosion hazard, score of 72 maximum erosion hazard score

27

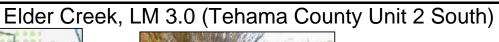
**Erosion Hazard** 

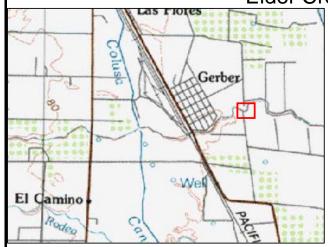
Score Notes Criteria Bank Slope (\*2) 2:1 slope Berm Width (\*2) - Estimated 35 ft 0 Location of erosion 4 bank and toe **Bank Stability** 2 vertical at toe outside of a gentle bend Site Relative to Bend 3 40% Vegetation Cover 2 3 large trees Tree Hazard Soil Type (\*2) 2 clays and silts Velocity (\*2) 2.92 ft/s 2 Human Usage occassioanl



30 ft Berm Width (\*2) - Estimated 0 Location of erosion 4 full bank and toe **Bank Stability** 0 no vertical sections or caves Site Relative to Bend straight 1 40% Vegetation Cover 2 large trees with exposed roots Tree Hazard 4 Soil Type (\*2) 2 clays and silts Velocity (\*2) 4.82 dt/s 3 Human Usage 2 seasonal

Erosion Hazard 27 Calculate Erosion Hazard



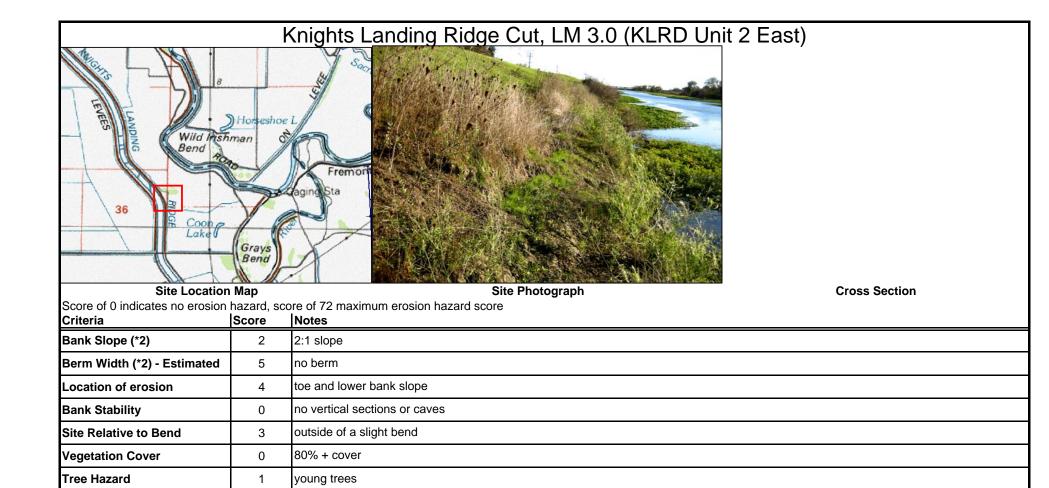




Site Location Map Site Photograph

Score of 0 indicates no erosion hazard, score of 72 maximum erosion hazard score

Criteria	Score	Notes
Bank Slope (*2)	3	1.5:1 slope
Berm Width (*2) - Estimated	1	25 to 30 ft
Location of erosion	4	whole bank
Bank Stability	0	no holes or vertical sections
Site Relative to Bend	5	outside of a tight bend
Vegetation Cover	0	80%
Tree Hazard	0	small trees
Soil Type (*2)	2	clays and silts
Velocity (*2)	2	3 ft/s
Human Usage	2	seasonal
Erosion Hazard	27	Calculate Erosion Hazard



Soil Type (\*2)

Velocity (\*2)

Human Usage

**Erosion Hazard** 

2

0

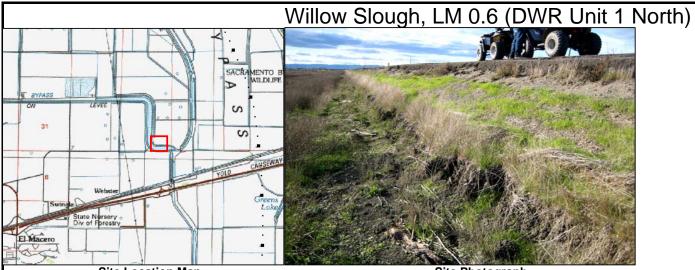
27

silts with some clays

occassional, no access but near town

Calculate Erosion Hazard

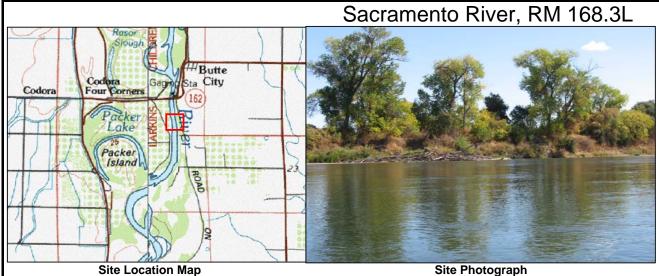
0.1 ft/s



Site Location Map
Score of 0 indicates no erosion hazard, score of 72 maximum erosion hazard score

Site Photograph
Cross Section

Criteria	Score	Notes
Bank Slope (*2)	3	1.5:1 slope
Berm Width (*2) - Estimated	5	no berm
Location of erosion	0	upper levee slope
Bank Stability	2	short vertical sections
Site Relative to Bend	1	straight
Vegetation Cover	2	50%
Tree Hazard	0	no trees
Soil Type (*2)	2	clays and silts
Velocity (*2)	0	0.5 ft/s
Human Usage	2	seasonal for duck hunting
Erosion Hazard	27	Calculate Erosion Hazard



Score of 0 indicates no erosion hazard, score of 72 maximum erosion hazard score

Score Criteria Notes Bank Slope (\*2) 2.5:1 slope 30 ft Berm Width (\*2) - Estimated 0 Location of erosion 3 toe **Bank Stability** 0 no vertical sections or caves Site Relative to Bend straight 1 60 to 70% Vegetation Cover 1 3 large trees Tree Hazard Soil Type (\*2) 4 sand and silts (sand deposited) Velocity (\*2) 4.81 ft/s 3 Human Usage 2 seasonal **Erosion Hazard** 26 Calculate Erosion Hazard



### Sacramento River, RM 104.5L



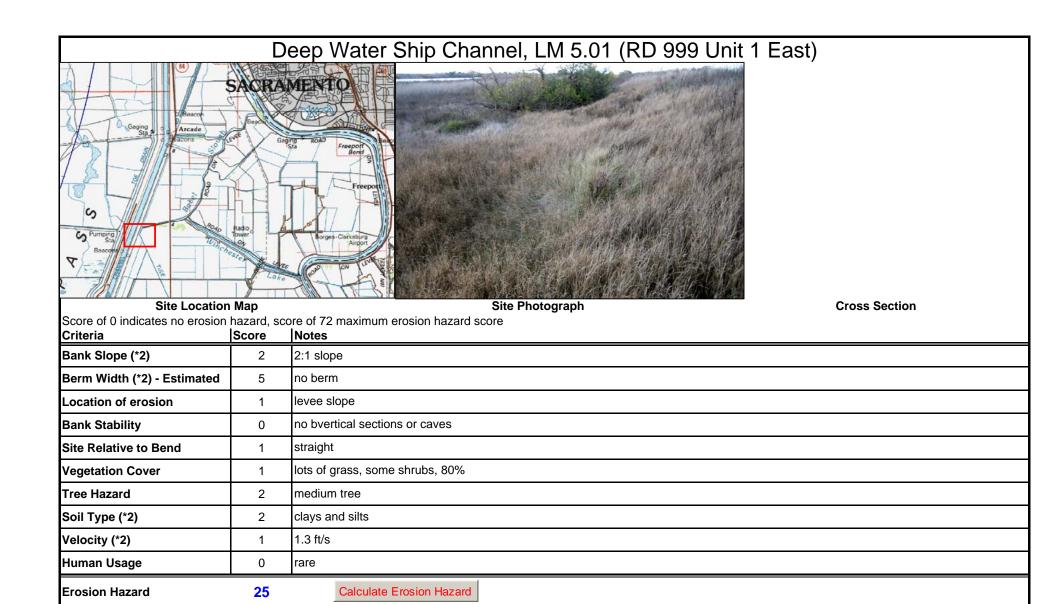
Site Photograph

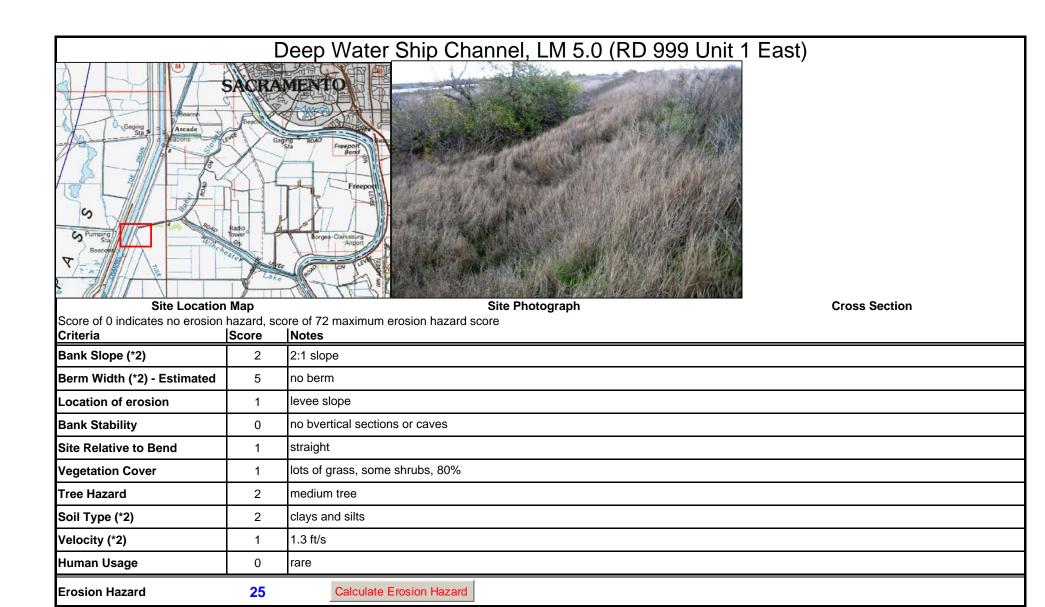
ograph Cross Section

Score of 0 indicates no erosion hazard, score of 72 maximum erosion hazard score

Criteria | Score | Notes

Criteria	Score	Notes
Bank Slope (*2)	3	1.5:1 slope
Berm Width (*2) - Estimated	0	40 ft
Location of erosion	4	berm and toe
Bank Stability	0	no vertical sections or caves
Site Relative to Bend	4	outside of a 90 degree bend
Vegetation Cover	1	70%
Tree Hazard	0	no trees
Soil Type (*2)	4	sands and silts
Velocity (*2)	1	1.68 ft/s
Human Usage	1	occassional
Erosion Hazard	26	Calculate Erosion Hazard











Site Photograph

**Cross Section** 

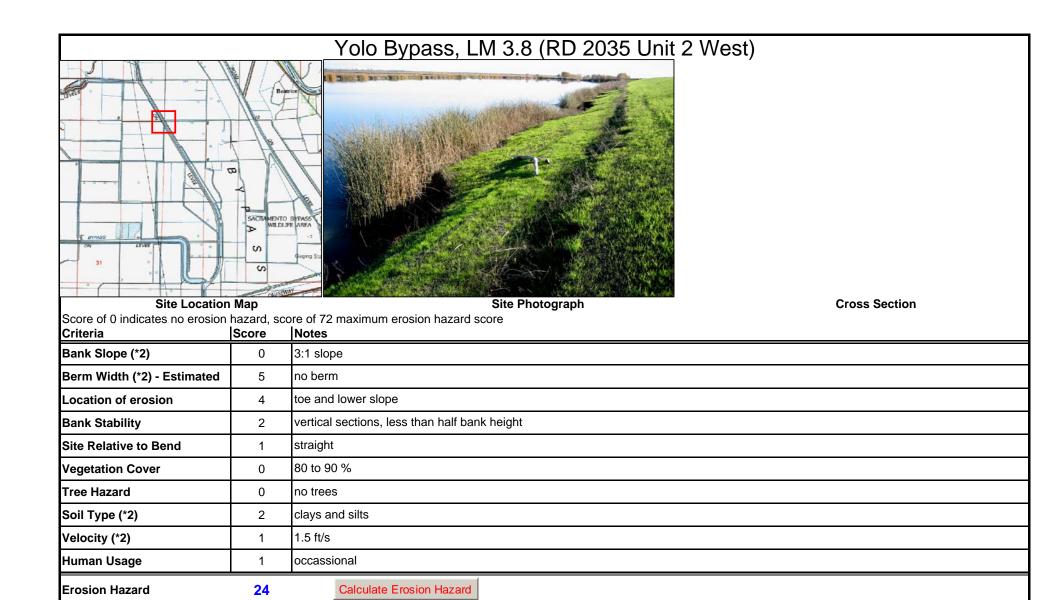
Score of 0 indicates no erosion hazard, score of 72 maximum erosion hazard score

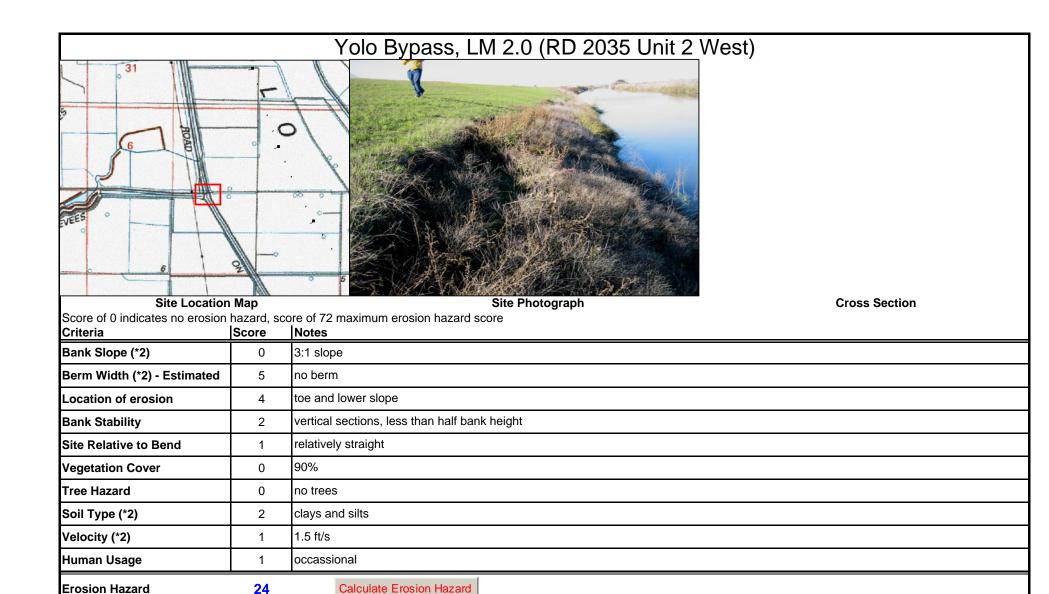
Criteria	Score	Notes
Bank Slope (*2)	0	3:1 slope
Berm Width (*2) - Estimated	5	no berm
Location of erosion	4	toe and lower slope
Bank Stability	2	vertical sections, less than half bank height
Site Relative to Bend	1	straight
Vegetation Cover	1	70%
Tree Hazard	0	no trees
Soil Type (*2)	2	clays and silts
Velocity (*2)	1	1.5 ft/s
Human Usage	1	occassional
Erosion Hazard	25	Calculate Erosion Hazard

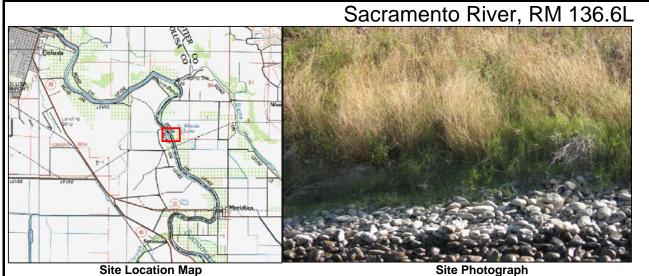


Site Location Map Site Photograph Cross Section
Score of 0 indicates no erosion hazard, score of 72 maximum erosion hazard score
Criteria Score Notes

Criteria	Score	Notes
Bank Slope (*2)	2	2:1 slope
Berm Width (*2) - Estimated	5	no berm
Location of erosion	1	mid levee slope
Bank Stability	2	short vertical sections
Site Relative to Bend	1	straight
Vegetation Cover	1	80%
Tree Hazard	0	no trees
Soil Type (*2)	2	slits and clays
Velocity (*2)	0	0.6 ft/s
Human Usage	2	season, frequent for Duck Hunters
Erosion Hazard	25	Calculate Erosion Hazard





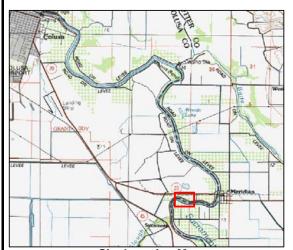


Score of 0 indicates no erosion hazard, score of 72 maximum erosion hazard score Criteria Notes

Criteria	Score	notes
Bank Slope (*2)	3	1.5:1 slope
Berm Width (*2) - Estimated	0	30 ft
Location of erosion	2	lower bank
Bank Stability	0	no vertical sections or caves
Site Relative to Bend	1	straight
Vegetation Cover	1	70%
Tree Hazard	0	no trees
Soil Type (*2)	2	clays and silts
Velocity (*2)	3	4.91 ft/s
Human Usage	2	seasonal

**Cross Section** 

**Erosion Hazard 22** Calculate Erosion Hazard



### Sacramento River, RM 133.0L



Site Location Map

Site Photograph

**Cross Section** 

Score of 0 indicates no erosion hazard, score of 72 maximum erosion hazard score

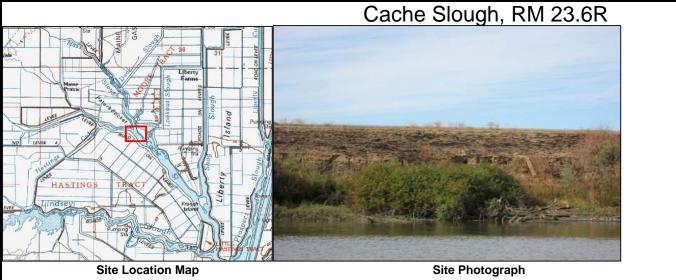
Criteria	Score	Notes
Bank Slope (*2)	2	2:1 slope
Berm Width (*2) - Estimated	0	30 ft
Location of erosion	2	lower bank
Bank Stability	2	vertical sections less than half bank height
Site Relative to Bend	2	just downstream of a bend
Vegetation Cover	2	60%
Tree Hazard	0	no trees
Soil Type (*2)	1	clays and rounded stone
Velocity (*2)	3	4.97 ft/s
Human Usage	2	seasonal
Erosion Hazard	22	Calculate Erosion Hazard



Site Location Map

**Cross Section** Score of 0 indicates no erosion hazard, score of 72 maximum erosion hazard score

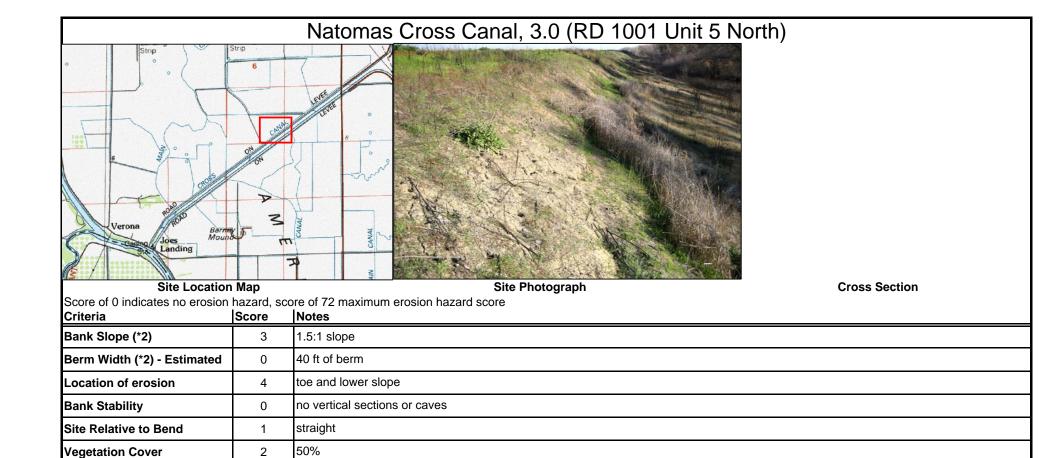
Criteria	Score	Notes
Bank Slope (*2)	2	2:1 slope
Berm Width (*2) - Estimated	2	10 ft
Location of erosion	0	upper levee slope
Bank Stability	0	no vertical sections or caves
Site Relative to Bend	1	relatively straight
Vegetation Cover	1	minimal in erosion area, 80% coverage on remaining land
Tree Hazard	2	medium trees
Soil Type (*2)	2	clays and gravels
Velocity (*2)	2	3 ft/s
Human Usage	2	seasonal
Erosion Hazard	22	Calculate Erosion Hazard



Site Location Map Site Photograph Cross Section
Score of 0 indicates no erosion hazard, score of 72 maximum erosion hazard score

Criteria		Notes
Bank Slope (*2)	2	2:1 slope
Berm Width (*2) - Estimated	0	no berm
Location of erosion	4	toe and lower bank
Bank Stability	2	some vertical sections, less than half bank slope
Site Relative to Bend	2	just downstream of a bend
Vegetation Cover	2	blotchy coverage, dense in spots, 50%
Tree Hazard	0	no trees
Soil Type (*2)	2	clay and silts
Velocity (*2)	0	0.27 ft/s
Human Usage	3	adjacent to levee road, monthly
Fracion Hazard	21	Calculate Fresion Hazard

Erosion Hazard 21 Calculate Erosion Hazard



Tree Hazard

Soil Type (\*2)

Velocity (\*2)

Human Usage

**Erosion Hazard** 

0

2

1

20

no trees

1.5 ft/s

silts with clays

occassional

Calculate Erosion Hazard